

BEYOND TONE: FUNCTIONS OF PITCH IN SHONA

by

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PREFACE

The dissertation work was begun at the University of Florida, where I had, for two years, access to Shona-speaking linguists, to other linguists who were trained within a number of theoretical frameworks in phonology, syntax and discourse, some of whom with considerable expertise the study of Bantu and other tonal and pitch accent languages, to Shona classes as well as to a broad range of written texts in and about Shona and other southern Bantu languages. The bulk of the work, however, was accomplished in Harare, Zimbabwe, where, under a Fulbright/IIE Research Grant, I was fortunate in being associated with the University of Zimbabwe's Department of African Languages and Literature for almost two years. During that time, I continued my studies of Shona as a second language and gathered most of the data upon which the dissertation is based. I also benefitted greatly from consultation with Shona-speaking linguists and others there, as well as from their assistance with the construction, translation and elicitation of data which I used to test the evolving hypotheses, all of which was generously given by various members of the Department, the Department of Linguistics and others, particularly within the University community.

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KEY TO ABBREVIATIONS

ADJ	Adjective
ADV	Adverb
COMP	Complement
CONJ	Conjunction
CONSEC	Consecutive Phrase
COP	Copula
DEM	Demonstrative
DET	Determiner
ENUM	Enumerative
IMP	Imperative
INF	Infinitive
INTERJ	Interjective
LOC	Locative
MAN	Manner
MV	Main Verb
N	Noun
NEARP	Near Past
NEG	Negative
NP	Noun Phrase
OC	Object Concord
p	Plural
PERF	Perfective
POSS	Possessive
PRHAB	Present Habitual
PRESPROG	Present Progressive
PRO	Pronoun
PROPN	Proper Noun
REL-PART	Participial Function as Noun Specifier
REMP	Remote Past
S	Sentence
s	Singular
SC	Subject Concord
SEL	Selector
STAT	Stative
V	Verb
WhQ	Wh- Question
1	First Person
2	Second Person
3	Third Person
#	Word Boundary
*	Unacceptable Form

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Shona is a south-central Bantu language, whose speakers mark both lexical and inflectional morphemes with one of two phonemically level tones. The tonal system, which has been analyzed through both structural and generative frameworks, has been shown to be one which is highly complex and subject to considerable variation. The realization of pitch shapes and relative pitch heights at the phrase level and above, however, cannot be accounted for, either accurately or completely, by current descriptions of morphological tone assignments and phonological assimilation and dissimilation processes.

The dissertation addresses three hypotheses: 1) phrase and sentence level pitch phenomena interact with and affect the realizations of phonemic, lexically assigned tones in Shona; 2) formally, a peak pitch, around which other pitches fall, occurs in each phrase; 3) functionally, peak pitch

placement marks each phrase as a phrase and at least reinforces the identification of phrase structure types.

To test the hypotheses, short passages were constructed which controlled for topic and contained a variety of structures in context. The passages were orally interpreted by five readers and recorded on audio tapes. Pitch shapes and levels, syllable duration, morphophonemic juncture and syllable loudness, when it was particularly prominent, were marked on the transcriptions of each reading.

The study incorporates two analytical frameworks: a structuralist framework was used to describe the formal aspects of the data, and an integrative discourse framework was applied to describe the functional aspects discussed.

The results of the analysis showed that a peak pitch occurred as close to phrase-initial position as the structure would allow in most phrases. It would often be accompanied by a junctural break and/or extra loudness. The data showed a strong correlation between peak pitch placement and phrase type for all readers. Discourse factors--old information, redundant structural marking, and the effects of a preceding peak which marked a containing structure--accounted for most exceptions.

The dissertation argues for a description which assigns tone at the lexical level and peak pitch, or accent, at the phrase level and discusses possible implications for such a

description. The Appendices include illustrative samples of the transcribed data.

PANAMA, CANAL ZONE
SOUTH-WESTERN CO. U.S.A.
100% COTTON FIBRE

CHAPTER 1 INTRODUCTION

Shona is a tonal south-central Bantu language which is spoken as a first language by some nine to ten million people, most of whom live in Zimbabwe. According to Guthrie's (1967) classification and others, the language is closely related to Tonga, Sotho, and Venda. The name "Shona" is of relatively recent coinage and has not, until this century, been used indigenously as a self-identifier. First-language speakers of the language are often regionally grouped as Kalanga, Karanga, Korekore, Manyika, Ndau and Zezuru speakers. "Town Shona," or "ChiHarare," which is reflected in the data comprising the basis of this study, is a rapidly evolving set of urban varieties spoken in the capital which shows influence from not only first-language Shona speakers from all areas of the country, but also the first-language speakers of other languages, most significantly speakers of English and Ndebele.

This study grows out of the relatively large body of work on Shona and initiates an exploration of phrase-level pitch, duration, loudness and other suprasegmental phenomena of the language. The study focuses on pitch variations, although the data under study here suggests that these seem

to be meaningfully intertwined with other suprasegmentals at the phrase level and above.

Work on suprasegmentals in this language has focussed upon morphologically assigned tones and upon the systematic effects these seem to have on generally adjacent tones in certain, specifiable environments. A considerable amount of work has been done which describes the phonemic tones assigned to the morphemes and syllables of Shona utterances. Positing tonal morphemes and tones inherent to segmentally realized morphemes, as most analysts have done, has helped create order from the apparent chaos of the surface data, but there has been very little work which would describe the phonetic pitch shapes or the phonetic pitch levels of the realizations of these tones in speech.

Thus, a problem arises when the analyst, faced with the surface data of speech in context, observes a wide range of pitch shapes and levels which are, in a language like Shona, divided into two abstract phonemic tones: high (H) and low (L). Evidence that the problem is a real one comes from discussions with linguists, some of whom speak Shona as a first language, and from the literature itself in which questions and disagreements often arise as to whether such-and-such a morpheme or syllable is "underlyingly H" or "underlyingly L" in tone--and even if, underlyingly, it carries a tone at all. It very often happens in speech that a tone is realized at the same pitch level as the tones of

adjacent morphemes, and, in other cases, as either higher or lower, often in polarity with the surface realizations of immediately preceding or succeeding tones. In short, describing the tones of Shona phrases solely in terms of morphologically assigned tones and phonological conditioning processes turns out to be an extremely complex task and one which is subject to continuing debate (please see Chapter 3).

Tones may be "real" in some psychological sense to speakers of the language, but, as with all such constructs, these are ultimately autonomous, forming part of the analysis, rather than of the data itself. Tonal analyses certainly help to account for the rising and falling of voices in Shona speech, but they do not provide a complete account. It is important to state at the outset that the pitch patterns realized in actual speech do not always transparently reflect simple concatenations of morphologically assigned and phonologically conditioned tones.

There is a possibility that something like phrase level or utterance level intonational patterns could interact with and affect the actual realizations of tones in context. As a matter of fact, Fivaz (1970), Fortune (1962, 1984) and Hodza and Fortune (1979) have stated explicitly that "intonation" is highly complex in Shona and that work which would study it is badly needed. Carter (in Carter and Kahari:1979, Part II) phrases the situation in a slightly

different way: "The analysis of the Shona tonal system has not yet been satisfactorily worked out ...(p. 6)." In the context of these observations, it is interesting to note this excerpt from Samarin (1952):

Intonation--even in a tone language--may be a means of expression as efficient as lexical forms in another language. Moreover, by ignoring intonation one runs the danger of unnecessarily complicating his description of the tonal phenomena or of not ever arriving at a satisfactory description (p. 81).

A body of research which describes or even addresses "intonation" or any meaning-bearing phrase level suprasegmental patterning in Shona has not yet developed. Even this study is not strictly a study of the "intonation" of the language, since "intonation," as the term is conventionally used, refers principally to non-lexical pitch contours, or "tunes" (Crystal:1969; Cruttendon:1986), which bring independent and contrastive meanings to utterances comprised of grammatically marked lexical items, such as the patterns found in these English examples: John is going.; John is going?; John is going?!; and John is going!!. Although there does seem to be a limited number of intonational patterns in Shona, such as that which distinguishes non-morphologically marked yes/no questions from statements, intonation, strictly speaking in this sense, will not be addressed in this work.

There is, of course, the possibility that the problem of accounting for the actual realizations of tones in the

context of Shona utterances may well be analogous to the one faced by analysts of the suprasegmentals of English, in which there is a wide range of stress levels found in the utterances of speech and where there are three (or four, depending upon the analysis) phonemic levels of stress. Work summarized and extended by Ladd (1981) shows that lexical stress (usually analyzed as being phonemic in English) and accent, which has sentence level functions in that language, interact to produce the multiplicity of stress levels found in English utterances.

It was particularly Ladd's work that influenced my decision to explore whether or not a similar process might be at work in the suprasegmental structure of Shona utterances. In his explanation that the process was not necessarily one specific to English, Ladd (1981:164) noted that Chinese, whose speakers use phonemic contour tones to distinctively mark lexical items, has a number of pitch contours which function as phrasing cues and which interact with these tones. And, I later discovered work such as that by Carter (1973; 1980) on Zombo, a dialect of KiKongo, and by Stuckey (1979) on Makua, each of which suggested in its own way that phrasal and/or syntactic considerations may enter into how tones are realized in at least two Bantu languages as well.

From the beginning, of course, I expected that the forms and functions of the results of these interactions

would be very different in Shona and English, but it seemed reasonable to hypothesize that the process itself could be shared, even by these two very different languages, particularly in view of work done on a number of languages whose speakers mark lexical items with contour or level tones¹.

My research addresses this basic question: Are there linguistically significant patternings involving pitch which signal independent, linguistically relevant, meaning to utterances in Shona? That is, above the level of the citation form, are there structures signalled by pitch (other than downdrift) in operation? If so, how are they structured? What do they signal--constituent structure, focus, old/new information distribution, intended illocutionary force, combinations of these, other things? Do they have systematic and describable effects on the surface realizations of morphologically (and/or phonologically) assigned tonal structures? In short, are there things going on which could be stated as "linguistically significant generalizations" about pitch structure above and beyond the phonological and morphological levels in Shona, and are these things analyzable?

¹ See also various additional indicators of non-lexical considerations affecting tonal realizations in Abangma (1987) for Denya; Faraclas (1984) for Obolo; Lanham (1984) on "South African Black English"; Leben (1985) on Hausa;; Lindau (1986) on Hausa; Muhammed on Hausa (1980); and Wilson (1968) on Temne.

The nature of the questions addressed required a methodology for data collection which controlled for topic and prompted a variety of Shona structures and lexical items in context.

In many respects, recording actual discourses of varying lengths from one or more speakers on a variety of topics would have generated the data I felt was necessary. However, after a great deal of consideration, I decided to deliberately exclude actual monologues and conversations in this initial study because they contain so many kinds and degrees of imponderables, particularly for an analyst with incomplete access to native speaker intuitions. Moreover, even several hours of recorded monologues and dialogues might not contain the variety of structural types--and/or of lexical items carrying the full range of tonal patterns--required for the study.

After considerable measuring of the pros and cons of such an approach, I decided to base this work on the oral interpretation of constructed texts. Readings of constructed texts would give the structural and tonal variety required, and would provide strict parameters for the data. Perhaps more importantly, "intonation of the emotional type" (Pike, 1948:18), the "intonational" uses of pitch generally assumed for speakers of tone languages, could, in the passage construction, be reduced, if not controlled. The possibility that a "reading intonation" would infect all

readings was seen as being potentially the biggest disadvantage of the approach. However, I decided that the work--which required the utterance of phrases within the context of discourses--had to start somewhere: reading intonation effects, if they existed, would have to be tested for and eliminated in subsequent work.

One hundred and twenty-four phrases, each of which was representative of one or another type of noun phrase, verb phrase or adverbial phrase were selected on the basis of existing tone-marked grammatical descriptions of the language. Lexical items were selected which represented the full range of tonal patterns for nouns and verb stems. Short passages, consisting of four to seven sentences each, were then constructed. Each passage was built around a single topic and was constructed to contain one of the phrases located somewhere other than in the initial or final sentence of the passage, although, as it turned out, a small number of passages contained two of the selected phrases. A total data base of one hundred and ten passages was constructed.

In the passage construction phase of the project, I had two primary goals in mind: 1) to see that the passages contained a variety of Shona grammatical structures in context, so that a large number of focal and logical relations would be represented in the data base; and 2) to

ensure that the passages approached conversational verisimilitude.

Each discourse was orally interpreted by at least three speakers. A total of five speakers (two women and three men) participated in the oral interpretations. The interpreters are all speakers of Shona as a first language and originally came from various parts of Zimbabwe. They all have been residents of Harare for some time and are associated with the University of Zimbabwe, either as Lecturers or as Honours Level Drama students.

All readings were recorded on JVC tapes. The recordings made at the University of Zimbabwe were overseen by the writer and recorded in the Linguistics Department's sound-proofed recording room by a professional recording technician. The recordings made in Gainesville, Florida, were recorded by the writer on a Thoughtmaster II dictaphone in a quiet room.

The texts were translated into English, and retranslated from English back into Shona by a second translator to ensure a relatively high degree of accuracy in translation. The translations were done in such a way that the grammatical structures were transparent in translation. Hence, they read clumsily in English, although, for the purposes of the analysis and for tone marking, structurally based translations were essential.

A great deal of time was spent developing a relatively narrow transcription which suited the suprasegmentals observed in the data. It became quite clear very soon that marking pitches as if they were level in this level tone language was an inadequate representation. A large number of the pitches clearly rose up or lowered down from the preceding pitch (or from silence) at the leftward endpoint to a level pitch, and others fell or rose at the rightward endpoint. Some rose or fell at both endpoints. Still others rose and "hung high," forcing a fall in the realization of an immediately following lower pitch level. Representing all of these as level pitches seemed to me to be an unacceptable oversimplification of the data. Thus, the iconic marking system used here, upon which the analysis is based, arose from the transcription process itself, since it was found that conventionally used symbols were not appropriate.

Pauses, other junctural breaks, devoicing, length and a number of glottal stops are also noted in the transcriptions, and, although these phenomena are not discussed to any great extent in this work, I decided that they needed to be noted because of the possibilities for their interactions with pitch and/or with one another. Degrees of loudness were less systematically marked. The transcriptions only note those syllables which, impressionistically, carried a significantly extra degree of breath force. In the transcription system finally adopted, compromise between

absolute accuracy as I heard it and my ability to reproduce it for the purposes of the dissertation was necessary.

The data were analyzed within two different but compatible descriptive frameworks. Neither framework posits deep phonological levels or configurations which may, or may not, underlie words and phrases. Descriptive work, in the sense I am using it, is work which I believe is a necessary preliminary to working meaningfully within the framework of one or another of the more abstract models: that is, abstracting away from the data for the purposes of making generalizations about it presupposes careful and systematic observations of it. Moreover, the potential practical and immediately useful applications of work describing these phenomena, which could have implications for first and second language teaching and for the continuing conventionalization of the written language, seems to me to require a descriptive account of them which is relatively concrete and reflective of how they appear on the surface of speech.

With respect to the forms of the realized suprasegmental phenomena, the analytical approach taken in this work is a structuralist one, because that mode lends itself best to the data collected. A careful and systematic observation of the forms occurring in the data requires the strict, relatively concrete classifications made possible by this approach to linguistic analysis and description.

However, while the structuralist approach to the data is adequate for describing the suprasegmental forms which occur in the data as suprasegmental forms, it is also, in a number of respects, too restrictive to be applied effectively to the body of data as a whole. The most significant of these restrictions is that the separation of levels of structure within the structuralist framework is simply too strict for handling suprasegmental patternings above the level of the citation form. That is, given a strictly structuralist approach to analysis, one must assume either 1) that phonetic variations of morphophonemically assigned--say--tones are conditioned by other morphophonemically assigned elements; 2) that these variations carry no significance; or 3) that these variations are prompted by non-linguistic factors, such as emotion, and are, thereby, not subject to linguistic analysis. This strict separation of levels creates descriptions of structural variations at the phrase level and above which are extremely limited in their application, such as those found in the work of Harris (1957) and Pittenger et al. (1960). Given the constraints a structuralist analysis imposes, generalizations about patternings arising at the phrase level and above are impossible unless one is analyzing a single discourse within a single and tightly specifiable context. And, within that framework, even these generalizations are applicable only to a particular discourse in a particular context.

The flexibility required by the phrase level data in the context of the short discourses considered here is achieved within an integrative discourse framework; that is, one which considers "the interrelatedness of various levels of linguistic organization," as put forth in the work of Tyler et al. (1988) on English, which has been heavily influenced by the work of Gumperz (1983), Ladd (1981) and, to some extent, by that of Chafe (1982, 1984). Specifically, as the framework is articulated, syntactic structures, suprasegmental patternings and lexicalized discourse markers interact to express the logical and focal relationships of the information content of the message being conveyed. Looked at from a structuralist perspective, this approach to linguistic description is speculative and non-scientific at best, but work within it has exposed regularities leading to deeper insights as to the functions of structures in languages as disparate as English (as in Tyler et al., 1988) and, for example, Yupik (Woodbury:1985).

The rigorous classification required for a description of the formal aspects of the data, then, is achieved here by adhering to the principles of a structural analysis. But, in addition, this initial exploration of non-lexical suprasegmental forms within the system of the language--which is shaped by the nature of the questions prompting this work--takes advantage of the insights the integrative discourse framework provides.

In the analysis, the readings of each passage were transcribed and compared. Similarities and differences were noted, as were any patterns which seemed to emerge. Exceptions to these patterns--when they occurred, which they often did--were also noted.

As the project proceeded, three specific hypotheses evolved: 1) phrase and sentence level pitch phenomena interact with and affect the realizations of morphophonemically assigned tones in Shona; 2) formally, at least one peak pitch, around which other pitches fall, occurs in each phrase; 3) functionally, peak pitch placement marks phrases as phrases and reinforces, when it does not signal uniquely, the identification of phrase types. These were strongly supported by the data.

The dissertation is arranged as follows: Chapters 2 and 3 serve as background to the balance of the dissertation, and, together, arise from and summarize previous work on suprasegmentals in Shona, most of which describes and analyzes tone. Chapter 4 describes various pitch phenomena observed in the data, and Chapter 5 argues for an analytical tool, a phrase level accent, which may be useful toward accounting for these phenomena. It is in this Chapter that a clear distinction between formal and functional descriptions of the data is made as well as a crucial distinction between citation forms and phrases. Chapter 6 makes

explicit some of the implications the research may have with respect to written text. Chapter 7 provides a conclusion.

Finally, there are three Appendices. The symbols which comprise the marking system used to describe the suprasegmentals in the data are found in Appendix A. There are, in addition to those listed, a very few "customized" pitch symbols which were used to represent pitch shapes which occurred infrequently in the data base. The system established by the more usual symbols makes the meanings of these markings transparent. Appendix B contains an illustrative sample of the marked data base, and Appendix C provides structure based English translations of the passages comprising the sample.

CHAPTER 2 SUPRASEGMENTALS

The use of the term "suprasegmentals" in this work will refer to pitch, duration, degrees of loudness, juncture and to systematic variations of the features of consonants and vowels, such as voicing and aspiration. The term, then, as used here, does not necessarily refer only to those acoustic parameters which spread across more than one segment. The use of the term, in this latter respect, may not be quite conventional, but, unfortunately, there is no conventionally agreed-upon word for these aspects of speech. I also use the phrase "prosodic markers" for these aspects of speech, but there are contexts which call for a word rather than a phrase. I use the two terms synonymously, with no distinction as to their information content. The choice of one over the other in a given context is a stylistic one. Both "suprasegmentals" and "prosodic markers" are, however, better cover terms than the inherently restrictive term "intonation," which, with respect to form, properly refers only to pitch contours or melodies.¹ While this work does deal primarily with patterned pitch variations in Shona, it will be shown that the patterns explored seem to rise and fall around peaks, patterns which are distinct from rather

¹ For a notable exception, see Bolinger (1951).

than being contours or melodies which are imposed on the utterance or phrase as a whole. The term "suprasegmental" also has the advantage of showing that these phenomena are distinguishable from "segments," the consonant, vowel, syllable and other units with which suprasegmentals are intertwined.

Moreover, because of the traditional "tonal languages" and "intonational languages" cut (see, for example, Crystal 1969, 1975; Carter and Kahari, 1979; Cruttendon, 1986) by which tonal languages are seen as those whose primary linguistically relevant pitch functions are lexical and intonational languages as those whose linguistically relevant pitch functions are non-lexical, use of the term "intonation" for Shona, use of the term "intonation" could well be misleading or confusing with respect to function, since, according to the data under study here, pitch functions both lexically and phrasally in linguistically relevant ways.

This chapter comprises a brief and very general description of the suprasegmental characteristics of Shona, since the published literature on suprasegmentals other than tone in the language is sparse indeed. Reference will be made to previous work where appropriate, but the focus here will be on the phenomena observed in the data corpus which forms the basis of this study.

In previous work, pitch descriptions, other than those required for the description of what have been described as

tonal alternations, for example, are generally restricted to descriptions of downdrift, which is discussed briefly below and in greater detail in Chapter 5. Certain patternings among pitch levels have been described briefly in Fivaz (1979) and in Carter and Kahari (1979), but no work, to my knowledge, describes pitch shapes in any more detailed way than through references to the "level tones" of the language. Pitch level and shape variations in this work will be touched upon in this chapter and explored in greater detail in Chapter 4.

Discussions of duration in the literature focus on potentials for penultimate length. Regarding feature variation in consonants and vowels, a minimal amount of description of voicing and nasal variations exists, but there has been a fair amount of literature on aspiration, or breathy voice, which is generally made up of work which would argue for its articulatory status. Junctural phenomena are touched upon in Marconnes (1931) and in Doke (1931). There are no explicit discussions, that I am aware of, of relative loudness.²

² For discussions of downdrift, see, for example, Stevick (1965), Fivaz (1970), Hodza and Fortune (1979), Fortune (1984), Chimhundu (1983, 1989). For length, see Marconnes (1931), Doke (1931), Stevick (1965), Fivaz (1970), Carter and Kahari (1979), Chimhundu (1983). For voicing, see especially Chimhundu (1983), Fortune (1962, 1984), and Carter and Kahari (1979). Dale (1981b) and Carter and Kahari (1981) both refer to [+/- nasal] and to [+/- voice] in connection with the realization of classes 9/10 and 5/6 (respectively) noun class initial consonant realization patterns in the singular and plural form. And for breathy

The research and description of meaning-bearing suprasegmentals in Shona has, by and large, been focussed on the exploration of two domains. The first, which is subject to on-going debate, explores morphologically assigned tones and their effects on other morphologically assigned tones. The tones explored within this domain either co-occur with contrastive sequences of consonants and vowels, or signal distinctive morphological meanings on otherwise homophonous morphemes within lexical items and phrases. The second domain explores, with an equal amount of ongoing debate, phonologically motivated tonal assimilation and dissimilation processes between and within lexical items and phrases.

Given the information which is currently available on meaning bearing suprasegmental structures in Shona, it is relatively easy to conclude three things: 1) the linguistically relevant generalizations about meaning-bearing suprasegmentals in Shona are those which are made about tone; and 2) all linguistically significant generalizations about tone are statable as being motivated by the morphology of the language, its phonology, or both; and 3) all other suprasegmental phenomena observed in Shona speech are either non-meaning-bearing or are motivated by non-linguistic factors; that is, they are motivated by the emotions of the speaker

voice, Doke (1931), Pongweni (1981, 1983, 1989), Chimhundu (1983), Hodza and Fortune (1979), Donnelly (1981), Carter and Kahari (1979).

rather than by factors inherent to the language system itself and are thereby not relevant to linguistic descriptions of the structure of the language.

However, as Ladd (1981) points out so effectively, linguists are accustomed to working with oppositions, with contrasts. It is therefore all too easy to think of meaning-bearing linguistic phenomena only in terms of their being inherently "contrastive," in the sense that a feature--or more than one feature--must be present (or absent) to account for a "difference in meaning." Further, if a difference in form is seen to be "non-contrastive," it is also seen to be not meaning-bearing in a "linguistically significant way." For example, on the phonological level, the fact that the word 'bye-bye' in American English is often articulated with imploded 'b' sounds, especially when called out to a small child, may be structurally interesting, since it contrasts with the explosive 'b' sounds used elsewhere. But it is not "linguistically significant" because it does not signal a linguistically relevant "difference in meaning." The same could not be said for a language like Shona, however, because the implosive/explosive contrast is phonemic in the language. That is, the presence or absence of, say, the feature [implosion] signals a lexical difference in meaning in Shona in such minimal pairs as bazi 'branch' (imploded) and bhazi 'bus' (explosive). The contrast in Shona occurs at the lexical level (which accounts for its

phonemic status in Shona), but the contrast in English is a discorsal (and phonetic) one, one which is motivated by the context of the utterance, rather than by "structural" considerations. Whether or not the imploded [b] in "bye-bye" is an emotionally motivated overlay on the normal explosive /b/, and is thereby not subject to linguistic description, or if it is a systematic, conventionally shared, feature of the structure of the language used by speakers to share shades of meaning has, until relatively recently, usually been an unasked question.

On the syntactic level, a given structure is either marked for negative and/or for question or it is not, and, generally, within the generative frameworks at least, a given verb with a given meaning is endowed with a feature to enable it to take an object or it is not. And, on the semantic level, common nouns are either plus or minus animate, plus or minus human, and so on. That is, we are trained to see things, first, in terms of "presence" or "absence," and second, that significant linguistic generalizations about "linguistically relevant meaning" necessarily involve contrasts between the 'presence' and 'absence' of one or more linguistic features. Ladd's (1981) point that it is partly for this reason that inherently gradient phenomena, such as pitch and duration, have been so resistant to linguistic analysis may well be a valid one. Such

phenomena, within some theoretical frameworks at least³, have been seen until relatively recently as only tangentially relevant to "real" linguistic analysis, and have been classified along with facial and other gestures, within these frameworks, as part of "paralanguage," which bear "expressive" meanings the linguist does not choose to address.

Ladd (1981) pinpoints the problem. It is that, particularly with pitch, duration and loudness, they are not present--"there"--or absent--"not there"--in speech. Both are always "there" in speech, but always to some relative degree or another to other pitches, durations, and occurrences of relative breath force. They are only "not there" in silence. Moving specifically to pitch, the linguistically significant contrast with respect to pitch in Shona, as it has been described, is that there is a an abstract set of pitches which comprise a phonemic "high" (H) or determinant (D) tone in a given environment which contrasts with another abstract set, which comprise a second phonemic tone, commonly referred to as being "low" (L) or "neutral" (N). But within the set of phonemically high pitches, there are some pitches which are realized at lower pitch levels than many of the multiplicity of "L" tone realizations, even within the uttering of a single sentence. In the sentence Kana

³ See particularly Bolinger (1964, 1972) and Ladd (1981) for discussion.

Ladd's own analogy to a radio, with an on-off-volume knob, where the phonetics of the matter does make a difference, demonstrates an independence of function, but a physical interdependence as well. In this case, both "on and off" and "louder and softer" are relevant:

As with the horn, it would be possible to describe the physical characteristics of any specific twist of the knob: the degree of pressure applied by the fingers, the amount of torque at the wrist, etc. In this case, however, there are two functionally separate aspects to the outcome of the driver's motion: whether or not the radio comes on (all-or-none...) and, if it comes on, then at what volume (gradient, not paralleled in the horn circuit).

This point will reemerge. It is brought up here, however, because, whether or not pitch and duration differences are meaning-bearing in some linguistically relevant way, they are still both contrastive and relative (or gradient) in nature. The suprasegmental variations described in this work, except for tone, do not reflect contrastive meaning at the level of the citation form, although they do systematically and predictably contrast in form. For this reason, they have been viewed--and are viewed here--as being motivated by non-lexical levels of the language system. It is hoped, however, that this work will show that these variations are relevant to a linguistic description of the structures of the Shona language.

Since the goal of this dissertation is to reach a deeper understanding of the forms and functions of pitch in Shona than is possible through a tonal analysis, discussion

beyond the much too brief material presented on suprasegmentals here is not possible. The descriptions which follow are brought up, however, because even overly broad and overly general descriptions of suprasegmentals in Shona so far have been extremely limited, in part because of the gradient nature of suprasegmentals in general; in part, perhaps, because of narrow focus on tone in the explorations so far accomplished; and, in part, perhaps, because intonations and other suprasegmental patternings motivated by non-lexical factors in tone languages like Shona have been seen to be emotionally overlaid onto linguistic structures, rather than being motivated by some level or another within the language system itself.

Traditionally, Shona is morphologically classified as an agglutinative language, in which inflectional and derivational morphemes can be prefixed and suffixed respectively to lexical roots and stems. Phonologically, it is characterized as having an open syllable (CC)V canonical structure and as being a level (or register) tone language, with two phonemic tones, "High" and "Low" (H and L). Its words and phrases reflect tonal sandhi and other pitch-related assimilation and dissimilation processes, which, in the literature, tends generally to be referred to as tonal changes. A few other aspects of pitch variations are also described, but these have generally been restricted to descriptions of 1) the effects depressor consonants have on tones; 2) down-

drift; and 3) the sequential raising of a series of high tones when the series is immediately followed by a word or stem final low tone, a phenomenon referred to in the literature as "crescendo" (Fivaz, 1970).

Depressors comprise a set of non-implosive, voiced consonants in Shona which motivate predictable types of high and low tonal realizations (Fortune, 1955, 1962, 1984); Fivaz, 1970; Pongweni, 1977, 1981, 1983, 1989; Hodza and Fortune, 1979; Carter and Kahari, 1979; Donnelly:1981; Chimhundu, 1983). The terms "breathy-voiced consonants" (Fortune, 1962), "murmered consonants" (Doke, 1931; Fortune, 1955) and "whispery-voice" (Chimhundu, 1983) are also used. I will use the term "depressor" when referring to these onsets in this work. First, it is the most widely used term. Secondly, since the most salient characteristic of depressors is that they affect the realization of tones by "depressing" them, depressor is an apt term for the purposes of this work.

The actual listings of the Shona consonants which have a "depressor effect" on tones vary considerably.⁵ As Fortune (Hodza and Fortune, 1979, after Ladefoged, 1967)

⁵ This may well be because some consonants, such as /g/, for example, which is not inherently laryngealized, can acquire a depressor quality in some contexts. The data under study here suggests that emphasis may be a motivator for this phenomenon and may account for the intensification and/or spreading of breathiness as well. Systematic work on the functions of laryngealization in this language is needed.

describes them, depressor consonants are produced while the vocal cords are lax, but still taut enough to produce voicing. This manner of production forces lower pitched tones than would be produced with other voiced consonant onsets. The quality of the consonant itself, and therefore of the entire voiced portion of the syllable, is relevant to the pitch level of the tone produced.

Despite the differences among terms and among the actual listings of consonants and/or clusters which qualify as depressors, there is general agreement that Zezuru speakers use "more of them" than the speakers of other dialects of Shona. There is also general agreement that depressors affect tonal realizations in these ways:

- 1) a H tone is realised as a rising contour: eg.
mha ˩ [+depressor]; ma — [-depressor]
- 2) a L tone is realized as a level tone, but lower in pitch than a tone not affected by a depressor onset. eg. mha ˩ [+depressor]; ma — [-depressor]

It is important to note, as Chimhundu (1983:197) points out, that it is the rightward endpoint of the tone that determines its phonemic value, since, as shown above, mha (H, depressor onset) and ma (L, non-depressor onset) begin at the same pitch level, even though the first is phonemically high and the second is phonemically low.

These depressors are among the factors that can bring rising contour pitches to this register tone language which --all things being equal--has tones which--phonemically, at

any rate--begin and end at approximately the same pitch level.

Downdrift, which is realized by a systematic series of terraces, or tone groups, between potential pauses--each of which begins wherever a L is followed immediately by a H--is characteristic of utterances.⁶ The data under study here showed that each phrase (NP, VP, ADV) in an utterance usually contained one at least one of these tone groups.

The language, as typically described, is syllable-timed so that, other things being equal, the syllables of an utterance tend to be of the same length.⁷ Most words and phrases have potential for extra penultimate length, which, in normal speech is not normally realized except before pauses. In the data collected here, however, penultimate length is often not realized even before pauses. Moreover, it was often the case that a syllable other than the penultimate preceding a pause--typically, the antepenultimate or the final but occasionally a stem-initial syllable which was located more than three syllables before the pause--carried extra length relative to the rest of the syllables in the phrase. It must be mentioned that Carter (Carter and Kahari, 1979) has described final lengthening being used in

⁶ For discussion, see particularly Fortune, 1984; Chimhundu 1983, 1989.

⁷ See, for example, Carter and Kahari, 1979, 1981; Hodza and Fortune, 1979; Chimhundu, 1983, 1989; and Fortune, 1984.

Length, at the lexical level, is non-contrastive. That is, there are no minimal pairs of citation forms in Shona in which one member is distinguished in meaning from the other by a difference in length. As it has been described, extra length at the penultimate syllable marks a word or stem final boundary. This may be usually true when words are pronounced with exaggerated slowness, at utterance-final position or when extracted away from the context of an utterance altogether.⁹ However, in the data under study here, penultimate length, when it does occur, seems to function not so much as a word boundary signal as it does a boundary signal of the phonological phrase, or, more properly perhaps, a pre-pause marker. For example, compare the length of the penultimate syllable of kudzidza 'to study/learn' in a) and b):

- a) kudzidza
 L H H
 "To study/learn"
- b) Ari kudzidza nyaya yakaoma chaizvo.
 H H L H L H H L H H L LH L
 "S/he is studying a very difficult subject."

In a) the length could be represented as ku.dzi:dza, where . is somewhat shorter than the length of :. In b) the three syllables of the word ku.dzi.dza. are approximately equal in length.

⁹ Exaggerated length, within the context of utterances, seems to be connected with emphasis, as noted below and in Chapter 6.

Although this length "contrast" could be described as being predictable and motivated by the phonological system itself when phrases or words are taken out of context as they often are for data-gathering purposes, in the contexts of the discourses gathered for this study, extra length was not predictable on these grounds. It is tentatively hypothesized, although a systematic exploration of this hypothesis will have to be done at a later time, that these extra lengths, in the contexts of discourses, may be motivated by other factors, such as emphasis.

If length were viewed as a predictable, systematic and purely phonological phenomenon, there is no way that a number of the lengths observed in the data could be accounted for.¹⁰ Length, as mentioned above, was also often reduced, even in this syllable-timed language. In the data, when length is nearly absent, it can be accompanied by the deletion of the voiced portion of the syllable; when it is relatively short, it can, but is not necessarily, accompanied by the devoicing of the nucleus vowel. In a number of instances in the data, syllable shortening was accompanied by the realization of a lax voiced allophone of an

¹⁰ Fortune (1962; Hodza and Fortune:1979) does, however, refer to length differences contributing to the lexical meaning of a number of ideophones, which are generally described as a set of phonaesthetic words which operate outside the grammatical and phonological structure of the language. The data base for this study contains only two ideophones, and these do not make up a minimal pair for length.

immediately following voiceless consonant onset. And, when duration is relatively long, it permits (but does not necessarily mandate) the realization of falling or rising pitch contours.

The effects of relatively short length, which results in deletion or devoicing of the nucleus can be exemplified briefly here by masikati 'afternoon' (LHHL). In normal speech, it is pronounced either as [masikati] (LHL, with the voiced portion of -si- devoiced) or as [maskati] (LHL, with the voiced portion of -si- deleted, thereby creating an /sk/ cluster). It is rarely if ever pronounced as [masikati] (LHHL) except in the most exaggeratedly slow speech. At utterance final position and even under emphasis, -ka- takes extra length and the i of -si- remains devoiced or deleted.

It is interesting to note here--although these phenomena will be described more fully in Chapter 4--that two things happen with the high tones in masikati, which are preserved in the shortened form. First, the first high tone is lowered, with respect to any earlier high tones in the utterance, because it follows a low tone. Second, the second high is higher than the first because contiguous highs followed by a word-final low acquire progressively higher pitches, a phenomenon which Fivaz (1979) labels as "crescendo." Thus, in very slow speech, the LHHL of masikati is realized as:

masikati
 L ˥ ˨ ˥

In [masikati], where devoicing occurs, and even in [maska-ti], where vowel deletion occurs, the remaining high not only does not lower, relative to previous highs, after the immediately preceding low tone, but it also keeps its "crescendo" pitch level: $\text{L } \text{H} \text{L}$. What has been pointed out with reference to a number of tonal languages, then,¹¹ is also found in Shona: the tone-carrying portion of a syllable may disappear for some reason, but the tone remains in the sense that it 1) continues to affect one or more contiguous tones; 2) blocks processes like downdrift where they would otherwise occur; and 3) preserves processes such as crescendo where they would otherwise disappear¹².

Lengthened syllables affect the shapes of tonal contours less subtly than shortened ones, in which the tone stays on to affect a contiguous tone in barely noticeable ways in Shona, as shown above. Reference was made earlier in the chapter to rising tones occurring with extra length in such forms as kure kure. Relatively longer syllables, such as is often imposed on the final two syllables of makorokoto 'congratulations' (LHHHH)¹³, can bring a falling

¹¹ For example, Goldsmith (1979) on Lemongo. This phenomenon motivated much of the argumentation which supports an autosegmental approach to the analysis of tone in languages which mark lexical items suprasegmentally by tone.

¹² Crescendo, by definition, requires a series of two or more highs.

¹³ Although both Hannan's (1981) and Dale's (1981) dictionaries mark this interjective with the LHHHH tonal pattern, a high-falling pattern on the final syllable is a

contour to the tone assigned to the syllable. A typical realization of Makorokoto is ˌ ɾ ɾ ˈ ɣ ɪ. The longer the length assigned to the lengthened syllables, the greater the rise or fall.

Syllable lengthening was often accompanied by what might be called a degree of devoicing in voiced stops like /g/ at syllable onset position and/or by the heightening of "breathy voice" within the syllable.¹⁴ Sometimes, breathy voice resulted in the heavy aspiration of a normally unaspirated consonant onset like /t/, and sometimes it spreads through the nucleus of the syllable.

Other possibly systematically imposed variations which occurred in the data, but which are not explored systematically in this study, include what Carter (1973) describes for the Zombo dialect of KiKongo as a "doubling" of stops, which, in the Shona data collected here, seems to be characterized by a delaying of the release of these consonants, or an interruption their articulation in what could be seen as a phonetically "lengthened" stop. Lengthening of nasals and other [+CNS] continuant syllable onsets was also observed

very typical realization.

¹⁴ Fortune (1962) and Hodza and Fortune (1979) point out that such features as voicing and breathy-voicing of consonants are characteristic of a number of ideophones and may well bring lexical meaning to them. Historically +/- voice and +/- nasalization may also figure into the sound patterns characteristic of the initial sounds of many nouns in noun classes 5/6 and 9/10 respectively. See Carter (Carter and Kahari:1979) and Dale (1981).

and was sometimes particularly noticable because the onset length even exceeded the "normal length" of the syllable's nucleus vowel. These variations tended to occur at stem initial position. Finally, a pre-vocalic, non-phonemic, glottal stop in vowel-initial syllables, rather than the typically realized /y/, /w/ or /h/ transitional elements, was observed quite often at phrase and stem initial position.

Although a wide range of degrees of loudness, or breath force, was observed, extra degrees of loudness were marked in the data only when they were heard to be particularly prominent. The relatively loudest syllable was sometimes also the syllable carrying the highest pitch within the phrase, although, at other times, the highest pitched syllable was the softest. At other times, the longest syllable within the phrase was the loudest. At still other times, the stem-initial syllable--which, in the utterance at hand was neither the highest pitched nor the longest within the phrase (it could even be relatively very low and/or short)--carried the greatest degree of breath force.

Two types of junctural phenomena were also observed in the data. The first seems to have potential for separating phrases. If the second phrase, which was separated out from the series by a pause--as would be the case, for example, with parenthetical remarks--was vowel-initial, its onset was

most often a glottal stop. High tone spreading¹⁵ would generally not obtain in these cases where a morpheme boundary plus juncture separated two vowels, and downdrift would often be interrupted. In a number of instances, a fully specified subject noun phrase and its verb phrase would be separated by this type of juncture, and there would be a "key drop" in the overall level of pitches in the verb phrase. Contiguous vowels which were separated by a morpheme boundary within the phrase were not subject to this phrase-separating juncture, on the other hand, and were subject to high tone spreading as well as to downdrift and were usually linked with /w/, /y/ or /h/. Key drops did not occur in these cases.

The second type of juncture noted was phrase-internal and would often occur between the last inflector of the phrase and the next succeeding morpheme--either an auxiliary morpheme or a stem or word. In other cases, it occurred stem or word internally. A relatively close parallel to the phenomenon exists in the English pair a nice and an ice, as in "a nice man" (where accent falls on man), and "an ice man" (where accent falls on ice). The parallel exists only in that the break in Shona is as light as the breaks are in the English examples above. Since Shona is an open-syllable language and English is not, the parallel, of course, is not

¹⁵ A process by which a H tone raises an immediately following L tone. Please see Chapter 3.

complete. That is, a difference in where the syllables begin and end is not the comparison here; it is, rather, that they begin or end noticeably. I refer to this type of junctural phenomena as "break" and will discuss it more fully in Chapter 4.

In all of these observed suprasegmental phenomena, only consonant and vowel features, such as voicing, aspiration, and juncture could be described as "being there" or "not being there;" that is, as being contrastive in this sense, and not particularly gradient.¹⁶ Asking about the degree of length, pitch height, or degree of loudness, however, in an out-of-context syllable (as Ladd, 1981:51 points out in another context) is as meaningful a question as one which would ask, out of context, "Does tree rhyme?" With these, once they are "there," their presence can only be described with reference to other instances of their occurrence which are also "there" in the utterance.

The non-phonemic suprasegmental variations touched upon in this chapter have not yet been systematically explored in published work, since their occurrences--particularly in out of context words and phrases--have not suggested linguistically relevant and meaning bearing patternings. When

¹⁶ As noted above, there were, however, a number of instances where a lax, or what might be seen as "partial," voicing was observed as well as instances in which the nasalization or aspiration was particularly noticeable. Thus, even these features could not be referred to as being completely non-gradient in this language.

studied through linguistic frameworks which explore signals of the organization of information, intentionality and language comprehension, however, these non-phonemic phenomena may well turn out to reflect previously unrecognized systems of linguistic organization in Shona. Regrettably, exploring them all in this work is well beyond the scope of the project, but the data under study here suggest that work with each of these phenomena will be critical in such explorations.

CHAPTER 3 TONE

To date, there has developed a relatively large body of descriptive work on tone in one or another of the dialects of Shona.¹ Both currently available Shona/English dictionaries (Hannan, 1981 and Dale, 1981a) mark for lexical tone. Fortune (1984, 1985), Fivaz (1970), Carter and Kahari (1979, 1981) and Stevick (1965) have made structural descriptions of tonal assimilation and dissimilation processes, and work has been done which analyzes the effects some tones have on other tones within words and phrases. This latter work tests and expands a number of aspects of Auto-segmental Phonology (notably Odden, 1981, 1984, 1986) and of Lexical Phonology (Myers, 1987). It is my understanding that work by Hewitt (in progress)² expands on Myers' work, and, like Myers', in part specifies phonological domains which explain certain tonal alternations in Shona.

¹ See Doke (1931) and Stevick for all dialects; Fortune (1972, 1984, 1985) Carter and Kahari (1979, 1981) Donnelly (1981) and Knappert (1961) for Zezuru; Dembetembe (1987) for Korekore; Jackson (1963) Pongweni (1977, 1980, 1989) and Odden (1981, 1984, 1986) for Karanga; Chimhundu (1983) for Karanga and Zezuru; Mkanganwi (1973) for Ndau; and Carter (1956), Stevick (1959, 1965, 1966, 1969) and Stevick and Machiwana for Manyika.

² I have not yet seen this work, but became familiar with its basic thrust at the 21st Annual Conference on African Linguistics earlier in the year.

Tone assignment in Shona has been seen as a morphologically motivated phenomenon. From this morphological motivation, it is seen to function both lexically and grammatically. That is, its function is to help to identify both lexical items and, because of its association with the various grammatical morphemes of the language, its grammatical structures.

Lexical tone in Shona, tone assigned at the citation form level of analysis, is analagous, in the broadest sense of that term, to lexical stress in languages like English, as Myers (1987) points out. For example, in Shona, chitumbu, 'gourd; calabash' (LLH), chitumbu, 'a small group' (LHH), and chitumbu, 'person with a protruding stomach' (LLL) are distinguished formally by surface tone alone, just as, in English, invalid, 'not correct or factual', and invalid, 'a sick person' are distinguished, outside of the context of an utterance, by stress assignment.

There are two very broad generalizations which can be made about the tones of nouns in Shona. First, those nouns which are derived from verbs and ideophones tend to preserve the tonal structure of their sources. Deverbalized nouns, for example, preserve the stem tones of the verb except for the final tone, as in chidzido (LHL) "lesson" and mudzidzi (LHL) "student" (LHL) (cf. -dzidza LHH "study; learn"). The preservation is more clearly seen in mudzidzisi (LHHL) 'teacher' in which the causative-marked (and extended) stem

-dzidzisa (HHH) is used in this nominalized form. The second broad generalization is that deverbalized nouns tend to carry a final low tone, a pattern shown in the three nominals cited above. Beyond these tendencies, the tone assignments in uninflected nouns seem to be arbitrary. The initial two syllables of nouns, for example, can carry HH, HL, LH and LL--all four logically possible combinations of tones--as in these examples: ziso HH "eye;" seri HL "place or direction;" muti LH "tree or medicine;" munhu LL "person."³

Verb stems, on the other hand, are generally much more systematic with respect to tone assignment. Verb stems fall into two classes: High and Low. High verbs usually carry, in their citation form (the verb stem for Shona), the pattern H1/3 Lx. (High through the first three syllables of the stem, and low thereafter). In citation form, low verbs carry the pattern Lx (low throughout). For example:

High Verbs

- <u>da</u>	(H)	'like, love, want, need'
- <u>ziva</u>	(HH)	'know, recognize, be/become aware, acquainted with.'
- <u>oneka</u>	(HHH)	'be clear, visible, obvious'
- <u>kanganisa</u>	(HHHL)	'make a mistake'

³ Work within one of the generative frameworks could well expose systematic patternings

- <u>kanganisira</u>	(HHHLL)	'wrong someone'
- <u>kanganisirana</u>	(HHHLLL)	'disagree with one another'

Low Verbs

- <u>ti</u>	(L)	'say, tell'
- <u>ita</u>	(LL)	'do, act, behave, bring about'
- <u>sandura</u>	(LLL)	'change, alter (nature, shape, size)'
- <u>chengetedza</u>	(LLLL)	'look after, take care of, conserve'
- <u>taurirana</u>	(LLLLL)	'discuss, chat, talk something over'

Each syllable of all Shona words and stems⁴, then, carries lexical tone, just as, for example, the syllables of all English lexical items carry one degree or another of lexical stress. In both languages, too, as they are traditionally analyzed, certain types of affixes can affect and override the lexically assigned suprasegmental markers. For example, in Shona, the grammatical prefixes ne- 'and, with, by'; se- 'like'; and zve- 'of, about, associated with' prefix to nominals to form adverbial and associative, or possessive, phrases, such as those in the following examples:⁵

⁴ See discussion of stems, words and phrases in Chapter 5.

⁵ Each of these "weak-vowelled inflectors" agrees with proper nouns and harmonizes with the initial vowel or glide of the next succeeding syllable with the other forms they inflect. Thus, -a- is used before proper nouns (noun

- 1) nebanga iro. (cf banga HH) "with that knife."
H L L L L
- 2) negumbo iro. (cf gumbo LL) "and that leg."
L H L L L
- 3) nemuti uyo. (cf muti LH) "with that medicine."
H L H L L
- 4) nebhuku iro⁶. (cf bhuku HL) "with that book."
H L H L L

These inflecting prefixes, which signal various logical relationships between noun phrases, are patterned with respect to their tone assignment and to the ways in which they affect the nouns which follow them. As can be seen from the examples above, the inflector goes polar to the surface realization of the initial tone of each common noun after having affected its tonal pattern. Note that a noun having LH on its initial two syllables remains unchanged, as in (3) above, and that the inflecting prefix is dissimilated from the surface tone of the initial syllable of the inflected form in each case.

classes 1a, 2a, and 2b) and it may be used before syllables containing -a-; -o- may be used before initial syllables containing -u- or w-; and -e- is used elsewhere. The "possessive" consists of an agreement marker which echoes the consonant onset, if there is one, of the noun class marker of the noun it inflects, plus one of the vowels described above. The zve-allomorph (plural thing class; class 8) is the general form and I will use it to represent the various realizations of this morpheme, and ne- and se- as cover terms for the others.

⁶ Alternate, but not necessarily common, forms are nabanga..., noqumbo..., nomuti..., and nobhuku...respectively.

In English, a similar type of process is in operation with a number of derivational morphemes. See, for example, sets such as 1-4 below, in which the primary stress is assigned according to which derivational morphemes are suffixed to the stem:

- 1) preside
- 2) president
- 3) presidential
- 4) presidentiality

This is, of course, not to say that the functions or the results of this process are similar in the two languages. They are not. Rather, it is to say that the process by which the functions are reflected and the results achieved is similar: inflectors (for Shona) and derivational suffixes with certain suprasegmental shapes (for English) affect how the suprasegmental shapes of words and stems are realized in systematic ways.

Describing inflectionally affected phrase tones in Shona and derivationally affected word stresses in English present similar kinds of problems in a synchronic analysis, however. Specifically, these are: 1) how to describe them; and 2) how to analyze them. In presidentiality, for example--even with pitch, duration, loudness, and the presence or absence of vowel reduction as acoustic cues--it is difficult to describe the relative stress levels of the seven syllables. It is easy to say that the syllable -al- carries primary stress and that, because they have reduced vowels, -si- and -i- carry weak stress, but assigning second

or third degree stress, with any degree of certainty, to the other four syllables is a difficult--if not impossible--task. It must be asked, then, once a word has been derived, if its stresses still carry phonemic status. It also brings up the question of whether or not the phonemic stress assignment of the root is important or even relevant once a word has been derived and affected by these morphemes. The root stresses have been conditioned by the derivational morpheme(s), and these stresses have changed in systematic ways which are predictable given the particular derivational morphemes. The stress assignments, if one is to preserve the traditional interpretation of what phonemic status is, must be seen as being conditioned variants--allophonic realizations. This interpretation leaves us with a word--presidentiality, for example--whose surface form has no phonemic stress, since even the primary stress assigned to -al- is conditioned by {ity}.

Given current approaches to the analysis of tone in Shona, where pitch realizations provide the only acoustic clues for tone assignment, the descriptive and analytical problems are similar. In nebanga (see above), for example, there are two morphemes, the inflecting ne- and the noun banga. Uninflected banga carries HH tone. In several varieties of Shona, and in much of the data under study here, the inflecting ne- systematically pushes down the pitches of all immediately succeeding Hs in the next suc-

ceeding morpheme, as it does with banga (HH) here and with bhuku (HL). It is then realized as H before the resulting surface L tone(s), just as it is with the surface L initial tone of a LH word like muti. With a word like gumbo (LL), the inflector raises the first of the lows in the next succeeding morpheme, and is, itself, realized as high.

Since the surface realization of the tone of inflectors like ne- varies, it must be asked if tone is inherent to this morpheme, and, if so, whether it is H or L. Another inflecting morpheme, nya- (L), 'owner, possessor, one associated with', which is invariantly realized as L unless it, itself, is inflected, does not affect the stem tones: nyabanga (LHH) (literally) 'owner of a knife'. The other inflectors realized invariably as low, except under inflection, also do not affect citation form tones, as will be seen later in the chapter. One may infer from this that since low toned inflectors do not affect stem tones and that others do, these others must either have a morphologically assigned H tone or that they are toneless. While there is no independent evidence that a toneless morpheme can affect succeeding tones in Shona, there is evidence that a H tone can. The nominal inflectors Va- "Mr." and sa- "owner of" or "Mr." in Manyika are both realized as invariably H, even when they, themselves, are inflected. Va- and sa- affect the stems of common nouns in precisely the same way ne- does (and, as se- "like" and zve- "possessive" do):

VaBanga HLL	sabanga HLL	nebanga HLL
VaGumbo HHL	sagumbo HHL	negumbo LHL
VaMuti HLH	samuti HLH	nemuti HLH
VaBhuku HHL	sabhuku HHL	nebhuku HHL

It is reasonable to assume, then, that ne-, se- and zve- carry a morphologically assigned H tone, even though it can be realized on the surface, as shown in negumbo above, as a tone which, phonemically, appears to be L. However, at the phonological level, the "L" in ne- in negumbo may not be as low as the low carried by nya- in a phrase such as nyabani:
negumbo nyabani . This, of course, would have to be tested with a number of lexical items in a number of contexts in order to make a claim to this effect, something which is not done in this work for reasons which will become clear as the discussion proceeds.

It is relatively easy to assign "phonemic" HLL to the inflected form nebanga, as the tone-marked literature for Zezuru usually represents it, because the relative distance between the higher pitch of the first syllable relative to the second is quite noticeable in those varieties of the language in which inflectors like ne- have this effect. However, it is much less easy with such forms as the aspect marker -no- in anoenda 'he went (non-past habitual⁷)', which

⁷ Carter (Carter and Kahari, 1981) persuasively argues for the use of the term "contracted present", a term which captures diachronic insights and which does not restrict semantic implication to "habituality" for this inflection. Since one of several of the semantic implications of verbs under this inflection is "habitual" and it is the most widely used identifier for it, I will use it here, although I agree with Carter that, particularly for teaching pur-

is usually tone marked HLLL. A typical realization is as follows: . In this phrase, -no- is typically realized at a level no lower than half-way between the H of a- and the stem initial L of e-. Would this mid pitched tone be described as a surface H or a surface L? Since it has been agreed that Shona has only two phonemic tones, it ought to be identifiable as one or the other if forms like anoenda are the lexical items--words--they are typically described as being.

However, there are no obvious acoustic cues as to its identity--the realization of its pitch level ranges from "equal to" the preceding H to "slightly lower than" the preceding H. Moreover, even its underlying phonemic status is open to a number of interpretations. One could posit that -no- is underlyingly low and raised because it is between two highs, a possibility explored by Fivaz (1970). Alternatively, one could posit that it is underlyingly high (as do Knappert, 1961 and Dale, 1972) and is lowered because it is followed by a morpheme boundary and a surface high (Knappert) or by a morpheme boundary and an (underlyingly) low toned verb stem with which it goes polar (Dale). Or, that it is underlyingly H and is lowered by the preceding H, a process which was exemplified with the inflected forms of

poses, "habitual" is a non-insightful and even misleading identifier.

banga and bhuku above, the interpretation taken by Myers (1987).

Alternatively, again, one could posit that -no- is toneless and acquires its tonal status in obedience to the rules of polarity described by Fortune (1985:78) for verbal inflections. The polarity rules are as follows:

If the inflection begins with a H and the number of syllables between it and the stem are even (2,4), the tones are assigned in polarity with the H. If odd (1,3,5), they go polar to H except the last, which goes polar with the stem initial surface tone. The same happens if the inflection begins with a L, except that 'odd' and 'even' have opposite effects.⁸

Less common in the literature is the positing of a "mid" tone. Jackson's (1963) analysis uses three tones, and, although most of the examples in his grammar are not tone marked, a few words and phrases are marked for the three tones he posits. Although positing three tones at the level of the citation form would probably not be a useful exercise, positing three tones at the phrase level might be, since there are a number of "structural minimal pairs" in Shona, which, out of the context of utterances, are homophonous except with respect to pitch realizations. An example is:

- a) achidya "s/he who ate it (today)" LMH (typically tone marked LHH)

⁸ When this description is charted out, the 'odd' tone of the high initial inflection and the 'even' tone of the low initial inflection that is in polarity with the initial tone of the stem is always "L."

- b) achidya "s/he, while eating..." LHH (typically tone marked LHH)

A two tone system does not show that these forms are as distinct as they are in speech, but a three tone system might. As a matter of fact, Knappert (1961) describes what he calls a "deflected tone" as a contrast tone which appears "...from a need to maintain contrast between two otherwise identical tones (p. 171)." With this middle tone, then, a contrast is made between two Hs without creating a L. He notes that "Tonetically, the interval between the two tonemes is two musical tones in this dialect (ciNdau), and one complete octave⁹ in the bordering ciZezuru dialect (p. 171)." The relative distance between H and M (and, for that matter, between M and L) is relatively slight in his data, something which was also true for most of the speakers in this study. In his analysis, the mid is tonetic for all speakers--notwithstanding the degree of interval--whereas both H and L are tonemic¹⁰.

⁹ Based on the data I have, I find the "full octave" descriptor a strong statement, but some speakers lowered to a noticeably lower level than others.

¹⁰ This may partly account for the native speaker intuitions of Shona speaking linguists that Zezuru speakers lower tones after a H and that others do not. The data under study here collected from the four non-Zezuru speakers showed that tones subject to "lowering in Zezuru but not elsewhere" were realized at either the same pitch level (as a kind of "echo" to the inflecting H tone) or at a slightly lower pitch level. The one Zezuru speaker sometimes lowered noticeably, and at others, not so noticeably.

Each of these approaches could account for the tonal realizations of inflectional morphemes like -no- in anoenda, but each results in a highly complex analysis when all verb phrase and clause types are taken into account, particularly when the stem tones found in these structures are accounted for as well, as is shown below.

The status of the tones in the stem -enda in the phrase anoenda is also not entirely clear. In its citation form, its tones are realized as LL. When inflected, however, the stem -enda (or a form of it, as in the subjunctive, shown as b) below) may be realized as HL, HH, LH or LL. See, for example:

- a) -enda (HL) as in tichaenda (LHHL) we will go
- b) -enda (HH) as in tiende (HHH) that we may
go
- c) -enda (LH) as in taenda (HLH) we, having gone
(today)
- d) -enda (LL) as in tinoenda (LHLL) we go
(habitually);
we're going
soon.

Positing an abstract autosegmental tier, or an abstract underlying metrical grid which link tones with syllables and associates tones with items in the lexicon with lines which carry no lexical information is an attractive way of looking at the problem of grammatical tone and its effects on stem tones in Shona--just as it has been with similar problems in English and other languages--since it avoids violating the etic/emic boundaries while accounting for the

formal realization of the data. As a matter of fact, since Fivaz (1970) a relatively large amount of generative work has been done which works toward expressing the systematicity of tonal assignments in Shona verbal forms elegantly, and some of these have taken an autosegmental approach.¹¹

But there remains the possibility that the problem grammatical tone assignment in Shona is a problem because it has been seen as being motivated exclusively by morphological tone assignments and conditioned by phonological dissimilation and assimilation processes. This possibility is the one explored in the succeeding chapters.

In a sense "grammatical tone" in Shona is of two types: one accompanies and is redundant to a (CC)V morpheme marker¹² like ne- and -no-. The other is the sole marker of such "morphemes" as relative, copula¹³, participial, consecutive, and main verb. I will refer to the first of these as "inflectional tone" and to the second as "phrase structure (PS) tone." The terms are used primarily for ease of

¹¹ See Odden (1981, 1984, 1986), and Myers (1987) for work coming out of the autosegmental approach. Fivaz (1970), Donnelly (1981), Borland (1972), Dembetembe (1987) and Pongweni (1977, 1980, 1989) have all done work coming out of non-autosegmental generative theory.

¹² Or two morphemes in the case of the coalesced person/tense/aspect markers in near past and near future verb phrases.

¹³ For discussion of the term "copula", please see Chapter 5.

exposition, since the tones of both types affect succeeding tones in the same ways and both function to help mark phrases. However, there are both functional and formal reasons which support this decision.

Functionally, the morphemes to which inflectional tone is assigned help specify the information content--which includes reference to the outside world as well as to the inside world of the speaker and which may include the logical relations of the utterance. Such inflectional morphemes specify, for example, tense and aspect in verb phrases, and respect, association and/or possession, similarity, agentivity, and instrumentality, in phrases with nominals as heads. The PS "morphemes," on the other hand, help specify how the information content of the utterance is organized, with respect to focus and dependency relations. A main verb phrase, for example, expresses the comment, as opposed to the topic of the sentence. A relative clause is dependent upon and further specifies a noun phrase. A participial is dependent upon the main verb and expresses some further verbal aspect of the event or topic being commented on.¹⁴ In past time events, the consecutive can serve to provide one of several means to express subsequent action to the action expressed by the main verb and, in non-past events, expresses conditionality. The copula func-

¹⁴ In Shona, both participial (which can function to further specify a noun) and relative clauses can function as noun phrases. For additional discussion, see Chapter 5.

tions as a focusing device and, structurally, converts a noun phrase to a clause or sentence.

Formally, the tones of inflectional morphemes are inevitably accompanied by distinctive (CC)V sequences, such as the ne-, se-, zve- and -no- referred to above.

The PS tones, on the other hand, are generally imposed on the subject, agreement or class markers of the inflected form.¹⁵ Both PS and inflectional tones usually affect the tonal shapes of succeeding morphemes whether these are inflectional or lexical. With both inflectional and PS tone, if the inflecting tone in question is H, systematic effects are usually realized on the succeeding tones. However, inflectional tones, even if H, do not affect PS tones when they precede them. For example, the possessive marker zve-, if Fortune's (1984) analysis is correct, can precede both relatives and participials. Normally, the H-toned possessives and inflectors like them affect the tones of the constructions to which they are prefixed if the tonal patterns are HH, HL, or LL. They do not affect constructions carrying an initial LH pattern. If the syllable(s) immediately following the morpheme is (are) H, it is (they are) lowered, as seen in the examples above. The relative, because it has a #LH form, predictably does not change. However, the participial, when prefixed by zva- to form a

¹⁵ Noun classes not marked by a syllabic noun class prefix, when inflected by the copula, are marked by an epenthetic /i/ prefix which carries a high tone.

noun specifier or noun phrase in which the head noun is the object of the clause, retains its initial high tone, even though it provides the specified environment for lowering to occur. In the latter case, the zve- dissimilates from the immediately succeeding H:

- 1) Handizive zvavakaziva. (Rel.) 'I know nothing
L H L H H L H L L about the ones who
know.'
- 2) Handizive zvavakaziva. (Part.) 'I know nothing
L H L H L H L H L about what they know.'

If the inflecting tone is L, there are no effects, save through the downdrift process, in which both H and L succeeding tones may be lowered slightly.

The systematic effects of grammatical--both inflectional and PS--H tones is that, in the speech of a number of speakers, they lower any immediately following Hs within the next morpheme. If the stem or word begins with LL, the high tone inflectional marker typically raises at least the first of these.

In phrases in which nominals are inflected, depending upon whether the H tone grammatical marker is weak-vowelled (as are the morphemes zve-, ne-, and se-, and the weak-vowelled allomorph of the copula marker ndi-, "nde-") or not, the weak vowelled inflectors then dissimilate from the resulting surface tone of the immediately following syllable and the others do not. In verbal constructions, the inflector will, except in the case of infixed object concords (OC), dissimilate if it is realized between Hs. Thus, most

morphemes having the shape HHHL¹⁶, HHLx, HLx, HHx and LLx will be affected by an immediately preceding high toned grammatical marker. The first four will have the highs lowered for many speakers in many contexts, and the LLx pattern will show at least the first low raised. LHx toned morphemes will not be affected. These patterns will, with variable tone grammatical morphemes in nominal constructions, be realized with grammatical prefixes that are H, H, H, H, L, and H, respectively.

Following is a listing of most nominal prefixes, that is, morphemes which precede the class marker of nouns, and, where they apply, the agreement markers of determiners, quantifiers and other noun modifiers. Generally, these inflecting morphemes are monosyllabic, and can be seen as carrying, at least underlyingly, H tone. There are, in addition, a few two-syllable inflectors, and a few monosyllabic low tone inflectors.¹⁷

- | | |
|--|-------------------------|
| 1. <u>sa-/se-/so</u> (<u>se-</u> in text) (H) | likeness;
similarity |
|--|-------------------------|

¹⁶ Three Hs are the maximum permitted by the system in uninflected stems.

¹⁷ One morpheme, -zvina- (HH) 'association, ownership', infixes between the class marker and the stem of the noun. According to Fortune (1984:158), it raises the first of a series of Ls, and does not lower succeeding Hs. He gives as the example: muzvinamunda-mukuru (LHHHL-LHH) 'The owner of a large field'. Chimhundu (personal communication) notes that the tones of muzvina are LLL and that muzvinamunda-mukuru would be realized LLLLL-LHH. He adds these: muzvinachikoro LLLLHL "owner of a school" and muzvinapurazi LLLLHL "owner of a large farm".

- eg. sazita (HLL)
cf zita (HH) namesake
6. nya- (L) association;
ownership;
characterized
by; user of.
- eg. nyakudziidza (LLHHL)
cf. kudziidza (LHHL) one charac-
terized by
studying.
nyagumbo (LLL) one associated
cf gumbo (LL) with a leg
7. pa- (L) locative: at;
near; on
- eg. pamusoro (LLHH)
cf musoro (LHH) on top
8. ku- (L) locative: to;
from; at
- eg. kumusha (LLH)
cf musha (LH) at home
9. mu- (L) locative: in
- eg. mumba (LH)
cf imba (LH) in the house;
in the room
10. madzi- (LL) plural of class
1a, 2a, 2b
- eg. madzimai (LLHL) mothers
cf amai (LHL)
madzishe (LLH) chiefs
cf ishe (LH)
11. vadzi- (HL) plural of class
2b
- eg. vadzimai (HLHL) mothers
cf amai (LHL)
12. vana- (LH) plural of
classes 1a,
2a, 2b (liter-
ally, 'the
ones with X')

eg. vanaGwata (LHHL)
 cf Gwata (LL)

the Gwata
 family

As can be seen from the glosses above, this set of prefixes functions at a number of levels of phrase structure. One or more members of the set can: express plural (10,11, 12); further specify a noun (3, 4, 5, 6); specify a possessive or associative phrase, which can function adjectivally, nominally or adverbially (3); mark an adverbial (1,2,7,8,9); conjoin two nouns or noun phrases (2). Since they are affected in the same ways at all levels of structure, structural functions and other structural considerations do not seem to motivate their tone assignments.

This observation is supported more strongly when other structures and structural markers are taken into account. Se-, ne-, and zve-, when prefixed to a number of infinitives, can serve to introduce a number of types of dependent clauses. For example:

- 1) sokuziva kunoita vanhu vose,... 'As everyone knows...'
- 2) nokuti... 'because...'
- 3) zvokuti... 'such that, so that, so much so that; with the result that...'
- 4) sokuti... 'For example...; as if...'

And, zve-, when part of a tensed relative construction (usually past tense and most often statively) can serve a sentence or verb phrase adverbial function.

- 1) zvakaipa badly
- 2) zvakawanda plentifully

These forms, and others like them, can also serve in adjectival function:

- 1) chokudya chakaipa terrible food
- 2) mvura yakawanda plentiful water

Most of the prefixes (4-11) prefix only to noun stems. However, se-, ne- and zve- also prefix to noun modifiers, such as the various determiners, adjectives and adjectivals, and to verb phrases, all of which serve nominally under these inflections.

Throughout these forms and functions, the general pattern of an inflecting high pushing down immediately following highs and raising the first of a series of lows tends to hold with many speakers, but not without exception. When sa- and Va- forms are inflected by se-, ne- or zve-, for example, they do not lose their high tones. Instead, they behave in a way which is similar to the participial + possessive structure noted above. The inflectors also do not affect the tones of the pronouns (predictably in the case of first and second person--LH; but not with third person--HL), the emphatic demonstratives, or the selector (which takes the tonal pattern HL in the modifying function; HH in

nominal function, according to Fortune, 1984). With these forms, the inflector merely dissimilates in tone:

- | | |
|--|---------------------------------------|
| 1. <u>naVaShiri</u> (LHHL)
cf <u>VaShiri</u> (HHL)
<u>shiri</u> (LL) | with Mr. Shiri |
| 2. <u>mbatya dzaiye</u> (LL LHL)
cf <u>iye</u> (HL) | <u>his</u> clothes
(lit. "of him") |
| 3. <u>zvaiyeyo</u> (LHLL)
cf <u>iyeyo</u> (HLL) | of <u>that</u> one |
| 4. <u>naichochi</u> (LHLL)
cf <u>ichochi</u> (HLL) | with <u>this</u> one |
| 5. <u>sokuno</u> (LHH)
cf <u>kuno</u> (HH) | as (is done)
right around
here |

It must be noted, as Fortune (1984:156) points out, however, that the third person pronouns, under what he refers to as emphasis, do not coalesce with the adverbial morphemes ne- or se-, and that, in that case, the adverbials dissimilate in tone, leaving the pronoun tones intact: naye (HL) 'with him/her.'; naiye (LHL) 'him/her too; by him-self/herself.'¹⁸ It will be noted that, with all of these, the -a-, strong vowel, form of the inflectors is typically used.

None of these H tone inflectors affect constructions that begin with a LH sequence of tones. Thus, predictably, the relative, which serves adjectival and nominal functions and can be inflected by zve- as mentioned above, does not change, nor do the LH initial 2b nouns. Unlike other LH

¹⁸ (or naiyeyo (LHLH), according to data collected for this work.)

initial words and stems, however, the two nouns in class 2b, amai (LHL) "mother" and ambuya (LHL) "grandmother", do not trigger a dissimilation in the tone of the inflector. Both are vowel initial words¹⁹, and, with two inflectors, vadzi- and madzi-, the initial vowel of the noun is absorbed: vadzimai; madzimai. Further, these nouns are respect forms, and the respect forms inflected with Va- (Class 2a) are unaffected by preceding high tones as well. Other proper noun forms, that is, those found in class 1a, behave exceptionally as well, in that they are not generally affected by se- and ne-, although they are affected by zve- and by the allomorph of the copula which is applied to them, ndi-. Low tone initial possessive structures which are further inflected by ne- remain unaffected as well, in their case predictably, because they are LH initial:

- | | |
|------------------------------|-------------------------|
| 1) <u>zvevanonzwa</u> (HLHH) | of ones who understand. |
| cf <u>vanonzwa</u> (LHH) | ones who understand. |
| and <u>-nzwa</u> (H) | understand. |
| 2) <u>nezvemunhu</u> (HLHL) | about a person. |
| cf <u>zvemunhu</u> (LHL) | of/about a person. |
| and <u>munhu</u> (LL) | person. |

The pattern is only violated with some overtly class marked nouns in which both the (CC)V class marker and the

¹⁹ Except in Karanga, where their forms are mai and mbuya, "mother" and "grandmother" respectively.

first syllable of the stem are raised by sa- and Va-, but not by se- or zve-:

<u>zvigaro</u> (LLL)	chairs
<u>sezvigaro</u> (LHLL)	like chairs
<u>nezvigaro</u> (LHLL)	with chairs
<u>zvezvigaro</u> (LHHL)	of chairs
<u>VaZvigaro</u> (HHHL)	Mr. Chairs
<u>sazvigaro</u> (HHHL)	chairowner (owner of chairs)

The copula construction, though which a noun phrase becomes a full sentence, reflects another use of the same tonal inflecting process, as noted by Pongweni (1977, 1980, 1989) and by Myers (1987). The copula has four allomorphs, all but one of which is invariantly high. The invariably high allomorphs of the copula are: ndi-, i- and the high PS copula tone. The fourth allomorph, nde-, in some dialects, undergoes vowel harmonization with the first vowel of and dissimilates in tone from the first syllable of the stem, just as is the case with the weak vowelised inflectors se-, ne- and zve- described above. Like them, too, pronouns and selectors take the -a- form, and many speakers use nda- with Class 2b nouns. Ndi- inflects the vowel initial pronouns and the class 1 honorific nouns.²⁰ i- inflects other nouns

²⁰ These class 1 nouns form a subset referred to as class 1a and are characterized by having no overt class marking prefix. They include proper names, including place names, and terms for special people. Class 9/10 also includes terms for people, but terms inflected by class 1a garner more respect and/or closeness and, often, class 9/10 [+HUMAN] nouns are moved into class 1a through the use of 1a agreement markers. In this work, nouns of classes 1a, 2a and 2b are grouped together as proper nouns because they pattern similarly, in ways not shared by the other noun classes, and because of the respect and/or closeness semantically implied

and adjectives with no overt class marker (classes 5 and 9/10). H inflects overtly class-marked nouns and adjectives and the class marked enumeratives, a 3-member set of [-DEF], [+DIRECTIONAL], [+SPECIFIC] determiners. For some speakers, the variable toned (and weak-vowelled) nde- inflects the class 2a and 2b honorific nouns, possessives, relatives, the vowel-initial demonstratives and the selectors. In addition, according to Fortune (1985:140-42) it inflects the class-marked quantitatatives, a 2-member set of grammatical morphemes which express 'all; every; the whole' and 'only; alone (if reduplicated, this morpheme takes on the sense of 'each'.), respectively.²¹

The inflecting tone of nda- dissimilates from the initial tone of the inflected stem with all stems except the two nouns (amai and ambuya) in the respect class 2b²², where, like the inflected respect form in class 2a, it remains low:

- | | |
|-------------------------------------|----------------------------------|
| 1) <u>vatezvara vanqu</u> (HLLL HL) | 'my father-in-law.
[+respect] |
|-------------------------------------|----------------------------------|

when people are the referents.

²¹ The only examples of copula inflected quantitatatives found in the literature (Fortune, 1985:142) involved 'all, every, the whole' -ose. Even these 'felt funny' to L1 speakers of Shona: ?? ndedzose idzi 'it is all of these'. Ndidzo dzose idzi, in which the pronoun takes the copula and is modified by the quantitative and the near demonstrative, 'felt' better and carried the glossed meaning.

²² Note that this is the same pattern which occurs with zve-, se- and ne-.

- 2) Ndavatezvara vangu. (LHLLl HL) It's my father-in-law. [+respect]
- 3) amai vangu (LHL HL) My mother [+respect]
- 4) Ndaamai vangu. (LLHL HL) It's my mother [+respect]

Nde- treats possessives in the same way that zve-, se- and ne- do. Compare 1 and 2, for example:

- 1) hama (HH) relative
hama vangu (HHHL) my relative
zvehama vangu (HLL HL) (things) of or about my relative.
ndezevehama vangu (HLHH HL) They belong to my relative; they're my relative's things.
- 2) harahwa (LLL) old man
zveharahwa (LHLL) (things) of or about an old man.
ndezeveharahwa (HLHLL) They belong to an old man; They're an old man's things.
- 3) vanochida (LHLH) (the ones) who want it. (subject relative)
nevanochida (HLHLH) with (the ones) who want it.
Ndevanochida (HLHLH) It's the ones who want it.
- 4) kwavakaenda (LHHLH) where they went. (object relative)
sekwavakaenda (HLHHLH) similar to where they went.
Ndekwavakaenda (HLHHLH) It's where they went.

Again, as with the possessive and adverbial markers, LH sequences are not disturbed by preceding H grammatical tones, even though these LH sequences are grammatical rather than lexical.

- | | |
|-----------------------|-----------------|
| 6) <u>iye</u> (HL) | he/she; him/her |
| 7) <u>Ndiye!</u> (HL) | It's him/her! |

If all inflecting tones having variable realizations on the surface were hypothesized to have underlying H tone-- like se-, ne- and zve-, this alternation could be accounted for quite neatly by a rule positing morpheme boundaries as part of the required specified environment:

A grammatical high will push down all immediately following Hs within the next succeeding morpheme (in those varieties of the language in which this process is realized); and will raise the first of a series of lows within the next morpheme.

To summarize the exceptions to these general patterns, as it applies to noun phrase structures and to other phrases with nominal heads, the following inflected stems do not change at any time:

- 1) Emphatic demonstratives (HLL--vowel-initial) Note that these carry inherent narrow focus.
- 2) Selector (HH in nominal function; some are vowel-initial.) These tightly specify a noun phrase as being tied to the here and now context of the discourse or reflect some other marked empathic connection with the specified noun.
- 3) Pronoun (LH--1,2 person; HL--3 person; vowel-initial.) These do not seem to function anaphorically. They seem to convey narrow focus.
- 4) Past-time Participial (HH invariably). These can be homophonous with main verb, relative, and consecutive phrase structures in some classes, including the third person human classes, except with respect to suprasegmentals.
- 5) sa- (H invariably) (conveys respect; proper noun marking prefix)

nouns.

- 6) Va- (H invariably) (convey respect; proper noun marking prefix)

The following inflected stems do not generally change under these inflections:

- 1) Class 1a nouns--do not change with ne- (concomitance, etc.) and se- ('like').
(These are proper nouns.)

The following inflected stems do not trigger dissimilation in the inflector:

- 1) 2b nouns (amai (LHL) and ambuya (LHL); vowel initial two-member class of proper nouns)

With nezve- and ndezeve-, it was shown that an underlying H zve-, when inflected by a preceding H tone, is treated as it appears on the surface. That is, zvebanga "of a knife" (HLL zve- has a surface H) changes to low under the inflection of ne- or nde-, thereby losing its own inflecting power (nezvebanga HLHH, "and of a knife; about a knife"). And, when it is realized as L, as in zvemunhu "of a person" (LHL), it is not affected by the ne- or nde-, nor is the noun it inflects (nezvemunhu HLHL, "of a person; about a person"), since the inflection created a LH environment.

In verb phrases, grammatical tone in Shona has been described, as grammatical tone has been in most tonal Bantu languages, as "characteristic tone;" that is, grammatical structures are seen as being characterized by distinctive inflectional and stem tone patterns which are associated, usually although not invariably, with equally distinctive (CC)V inflectional sequences. They are often referred to as

"tonal conjugations." Compare, for example, the tonal patternings of the following inflections:

- | | | |
|--------------------------------|------------|-------------------------------------|
| 1) <u>anoverenga</u> | (HLLLL) | s/he reads |
| 2) <u>ndinoverenga</u> | (LHLLL) | I read |
| 3) <u>haachaverenga</u> | (LHHLHL) | s/he will not read |
| 4) <u>kana achiverenga</u> | (LL LHHHL) | s/he, while reading... |
| 5) <u>ariverenga</u> | (HLHHL) | s/he read it (the book) [near past] |
| 6) <u>akariverenga</u> | (HLHHHL) | s/he read it (the book) [far past] |
| 7) <u>akariverenga</u> | (LLHHHL) | and then s/he read it |
| 8) <u>ngativerenge</u> | (HLLLL) | let's read |
| 9) <u>averenge</u> | (HHLH) | so that s/he might read |
| 10) <u>overenga</u> | (HHLL) | s/he'll read just now |
| 11) <u>kuverenga</u> | (LLLL) | to read; reading |
| 12) <u>ari kuverenga</u> | (HH HLLL) | s/he is reading |
| 13) <u>asingaverenge</u> | (LHHLHL) | the one who didn't read |
| 14) <u>(dai) asingaverenge</u> | (HLHLHL) | (if only) s/he wouldn't read |

A few "morphemes", however, specifically the relative and past tense marked participial markers, past tense main verb markers, the consecutive/conditional marker, and one realization of the non-past copula marker are signalled uniquely by PS tones together with their systematic effects on the rest of the tones within the inflection. For these

grammatical structures, the (CC)V sequences may be homophonous, but the tones which accompany them are distinctive, as well as distinguishing. Without tone marking or a context, the printed phrase akaverenga, for example, could be glossed "(the one) who read"--nominal or relative clause; "(the one) having read"--nominal or participial clause; "(s/he) read"--main verb clause or sentence; or as "and s/he read"/"if s/he were to read"--consecutive phrase. Similarly, munhu could be glossed, with different tone assignments, as "a person"--noun phrase; and "s/he is a person"--sentence.

This segmental homophony in which structural distinctiveness is carried solely by suprasegmental assignment may be analagous in principle, although not in form or function, to how English distinguishes word class assignment by stress (as in the familiar 'pervert/per'vert noun/verb pair) and how it formally distinguishes the existential 'there' (which cannot carry full stress) from the locative 'there' (which cannot carry weak stress), as shown in (a) and (b) respectively, below:

- a) There's a fly in your soup.
There's the story about the farmer's daughter.
- b) There's a taxi.
There's the fly in your soup.

That is, grammatical distinctions can, to one extent or another, be made in both languages by suprasegmental means alone. Which grammatical distinctions are made in the two

structures which share each of the ten stem patterns Fivaz posits. It will be seen that functional and semantic relationships among the structures which share a particular stem tone pattern are, at best, not transparent. This observation may support linguists' intuitions that, in these phrase structures, structural interpretation does not motivate these patterns.

<u>Stem Form</u>	<u>Structural Description</u>	<u>Examples of Inflectors</u>
Stem Form A (Affects only High Stems)	Infinitive	ku- (L)
	Negative Infinitive	kusa- (LL)
	Imperative	o ²⁴
H1/3 Lx	Present Habitual MV, 1,2,3	tino- (LH), vano- (HL)
	Relative Present Habitual	tino-, vano (LH)
	NEG Present Habitual 1,2,3	hati (LH)
	Past Habitual 1,2,3	tai- (LH), vai- (HL)
H	Relative Past Habitual 1,2,3	tai-, vai- (LH)
HH	PART Past Habitual 1,2,3	tai- (HL)
HHH	NEG PART Past Habitual 1,2,3	hatai- (LHL)
HHHL	NEG REL Past Habitual 1,2,3	vaissa- (LHL)
	FUT/REMP/POT (3)	vacha- (HL)
	REL Recent Past 1,2,3	va- (L)
	Present Participial 1,2,3	vachi- (LH)
	Consecutive 1,2,3	tika- (LL)
	NEG Consecutive 1,2,3	tikasa- (LLL)
	Subjunctive 1,2,3	va- (H)
	NEG Subjunctive 1,2,3	usa- (LH); vasa- (HH)
Stem Form B (Affects only High Stems)	NEG PART Present Habitual 1,2,3	tisinga- (HLH)
	PART Recent Past 1,2,3	ta- (H)
L		
HL		
HLH		
HHLH		
Stem Form C (High Stems)	NEG REL Present Habitual 1,2,3	vasinga- (LHL)
H	NEG REL Potential 1,2,3	vasinga- (LHL)
HL	PART FUT/REMP/POT 1,2,3	tinga- (LH)
HLH	NEG FUT/REMP/POT 1,2,3	hatinga- (LHL)
HHLH	NEG REL FUT/REMP/POT 1,2,3	vasisa- (LHL)

²⁴ Initial epenthetic vowel, when required, is L.

Stem Form D		
H1/1 Lx	FUT/REMP/POT 1,2 (L stems)	ticha- (LH)
	Exclusive (L stems)	to- (H)
H	FUT/REMP/POT 3 (L stems)	vacha- (HH)
HL	REL FUT/REMP/POT 1,2,3 (L stems)	vacha- (LH)
HLL	RECPST 1,2 (H/L stems)	ta- (L)
HLLL	RECPST 3 (L stems)	va- (H)
Stem Form E		
(Low Stems)	Habituals, Infinitives, Consecutives as for Form A above, but for L Stems (except for Negatives in Stem Forms H and I.)	PART & REL Habituals carry LHH on in- flectors for L stems; Otherwise, as for Stem Form A.
Lx		
L		
LL		
LLL		
LHL	Hortative (H, L stems)	hati- (HL)
	NEG Hortative (H, L stems)	hatisa- (HLL)
	Exclusive 1,2,3 (H stems)	to- (H)
	RECPST 3 (H stems)	va- (H)
	FUT/POT/REMPST 1,2 (H stems)	ticha- (LH)
	REL FUT/POT/REMPST 1,2,3 (H stems)	ticha- (LH)
Stem Form F		
H	REL RECPST 1,2,3 (L stems)	va- (L)
HH	PRES PART 1,2,3 (L stems)	vachi- (LH)
HHL	Subjunctive (L stems)	va- (H)
HHLL	NEG Subjunctive (L stems)	usa- (LH)
Stem Form G		
(L Stems)	All inflections with OC	varied
H		
HL		
HHL		
HHLL		
Stem Form H		
(Low Stems)	NEG Present Habitual 1,2,3	hati- (LH)
L	NEG PART Present Habitual 1,2,3	tisinga- (HLH)
LH	PART Recent Past 1,2,3	ta- (H)
LHL		
LHLL		
Stem Form I		
(Low Stems)	NEG REL FUT/POT/REMP 1,2,3	vasinga- (LHH)
H	NEG REL Present Habitual 1,2,2	vasinga- (LHH)
LH	PART FUT/POT 1,2,3	ticha- (HH)
LHL	NEG POT/REMP 1,2,3	hatinga- (LHH)
LHLL	NEG REL FUT 1,2,3	vasisa- (LHH)
Stem Form J		
(Low Stems)	Imperative	as with H stem IMP
H		

LH
LHH
LLHH

Regarding verb phrases, it is interesting to note that the effect of an inflecting H on verb stems in a number of inflections reflects what is essentially the same patterns as those described on above for phrases with nominal heads. In person/tense + aspect + stem affirmative tensed incidental constructions (no additional aspect markers, no object or reflexive markers), there are three tonal conjugations, as Fortune and others refer to them, which spread over the stem of the inflected verb. These are:

- 1) H1/3 Lx (depending on the number of syllables; H up to three, L thereafter). (citation form for H)
- 2) Lx (Low, regardless of the number of syllables) (citation form for L; inflected form for H)
- 3) H1/1 Lx (a single high, followed by lows). (inflected form for L)

Charted out, these inflections work out as follows:

Person/ Tense	Infl. Tones	Stem Pattern	
		H	L
1,2 Habitual	LH	H1/3 Lx	Lx
3 Habitual	HL	H1/3 Lx	Lx
1,2 FUT, POT, RMPST	LH	Lx	H1/1 Lx
1,2,3 NRFUT	H	Lx	H1/1 Lx
3 NRPST	H	Lx	H1/1 Lx
3 FUT, POT, RMPST	HL (before H)	H1/3 Lx	---
	HH (before L)	---	H1/1 Lx
1,2 NRPST	L	H1/1 Lx	H1/1 Lx

The first and second person/tense/aspect marker of the recent past PS tone is low in this monosyllabic inflection. The tone inflects low toned stem tones by raising the first tone in the usual way, but it does not lower H toned stems, even in those varieties of the language where this type of lowering usually occurs, thereby violating the prediction for those varieties. Note, however, that L and H stems carry the same inflectional tone pattern, which not typical. It is interesting to note that in every case in which a H tone stem carries the Lx pattern, it is immediately preceded by an inflecting tone which is realized as a surface H. And, whenever a L tone stem is realized as H1/1 Lx, as it inevitably is in these inflections, it is also preceded by a surface H tone inflector.

If one of these inflections begins with a H, the next inflecting tone will be realized as non-high, and the next will be realized as H; if it begins with a non-high, the next will be H, the next non-high, and so forth until the stem is reached. If the resulting pre-stem tone is H, the stem will inflect--unless something intervenes, as is the case with object markers. If the resulting pre-stem tone is L, it cannot inflect, and, if the stem is inflected despite an immediately preceding surface low tone, it is inflected by something else. If the stem preceded by a surface H is a L tone stem, its first tone is raised to H; if it is H, all

stem initial high tones in series go to L in those varieties of the language which undergo this type of lowering.

	<u>ndichauya</u> (LHLL)	I will come
	cf <u>-uya</u> (HH)	
BUT:	<u>ndinouya</u> (LHHH)	I will come
	<u>ndichaenda</u> (LHHL)	I will go
	cf <u>-enda</u> (LL)	
BUT:	<u>ndinoenda</u> (LHLL)	I will go

Lest this seems systematic in a reasonably transparent way despite the exceptions, in third person inflections, the remote past -ka-, the future -cha-, and the potential -nga- are realized as L if they immediately precede a H stem and as H if they immediately precede a L stem. Both H and L stems, however, behave as if they are immediately preceded by a H:

<u>achauya</u> (HHLL)	He will come
<u>achaenda</u> (HLHL)	He will go

If the same inflectors precede an object marker, their realization is more typical of other inflectors and they take H whether the stem is H or L.

The object marker is realized in polarity with the tone of the citation form--not the surface tone of its initial syllable--of the stem. The object marker²⁵ then inflects L stems by raising the first two non-final L tones, since,

²⁵ Object markers trigger the following patterns in stems: H1/3 Lx in high stems; H1/2 Lx in low stems. Some speakers use the pattern H1/1 Lx for low verb object-marked incidentals, relatives, infinitives, consecutives, etc.

with L stems it is realized as H. It does not inflect the H stem, since it is realized as L:

<u>achachikanganwa</u> (HHLHHH)	He will forget it
cf <u>-kanganwa</u> (HHH)	
<u>achariverenga</u> (HHHHHL)	He will read it
cf <u>-verenga</u> (LLL)	

This section has presented a summary of the inflected nominal forms and most verbal forms, stated from the point of view that the morphology and the phonology interact to create surface realizations of the tones of utterances. Throughout, a H tone inflector typically lowers immediately following H(s) in the next succeeding morpheme. If the next succeeding morpheme is a grammatical one, most speakers lower it²⁶, but, if the next succeeding morpheme is a lexical one, lowering seems to be more noticeable among Zezuru speakers than among the speakers of other dialects. The high tone inflector raises at least the first of a series of Ls in the next succeeding morpheme, for most speakers, whether that morpheme functions grammatically or lexically. Noun phrases and verb phrases, then, are affected similarly, albeit, given a tonal analysis, both of these systems are highly complex.

The reader familiar with the grammar of Shona will have noticed that no explanation has been offered here which

²⁶ Except in the third person past, future and potential main verb inflections, where a crescendo pitch series can be realized.

accounts for the stem internal alternations which pattern with past tense marked participials, some forms of the subjunctive, and the ha- initial negative forms of tensed main verbs²⁷, since the effects of a H on succeeding tones so far described are crucially dependent upon an immediately following morpheme boundary. Given a tonal analysis, one sees that a stem initial or a stem internal H, in these inflections, can have the same effects on succeeding stem tones without an interceding morpheme boundary. Within a tonal analysis, making generalizations--even those from within a generative framework--which would account for these data and yet not include all stems in all inflections²⁸ leads to an extraordinarily complex analysis, as ably demonstrated by the work of Odden (1981, 1984, 1986). Such an analysis will not be attempted here.

This last portion of the chapter addresses what have been described as word-boundary adjustment processes, or external sandhi, in which, again, it will be seen that the general tendencies for a H, in the environment of an immediately following morpheme boundary, are to push down succeeding Hs and to raise the first of a series of Ls.

²⁷ In Fortune (1985), these are generally patterns found under Tonal Conjugations 5 and 5a.

²⁸ Where such generalizations clearly do not apply even though the phonological environment would allow them to.

There are two sandhi rules described for Shona by Fivaz (1970), Fortune (1984) and Odden (1981). The first is a lowering rule. It requires that a word final high be lowered if and only if it is preceded by a high and followed by a word initial high. This rule, expressed formally (and phonemically) is: $H \rightarrow L/H_ \# \#HX$.²⁹

According to Odden (1983), who presents the most detailed discussions of sandhi in Shona, this sandhi rule applies regardless of syntactically determined phrase boundaries as long as the phonological environment is satisfied. My own data confirm that, even across a NP/VP phrase structure boundary, at which a potential pause exists, final lowering usually occurs unless the pause is actually realized. That is, the pitch level of the final H is usually lowered even when a major constituency boundary is involved, unless it is blocked by an actual pause. For example:

- a) Murume ari kutaura. (LHL HH HLLL) 'The man is talking.' (The -me of murume is lowered.)

BUT

- b) Murume (pause) ari kutaura. '(LHH pause HH HLLL) (No lowering occurs here.)

²⁹ Within the word, three successive highs can only occur within stems. There, they crescendo, if followed by a word-final low, or are realized at the same pitch level otherwise. If the three highs are found in the configuration $H\# \#HH$, sandhi would still not apply, as Odden (1981:20-1) has pointed out. That is, to use his examples, anoda + hari 'he wants' + 'a pot' (HLH + HH) does not go to anoda hari 'he wants a pot' (*HLL HH). The precise configuration as specified by the rule, including word boundaries, it is claimed, must be met for this sandhi process to operate.

c) Mukadzi wenyu (LHL HL) 'Your wife'

BUT

d) Mukadzi (pause) wenyu (LHH pause HL)

AND

e) Murume mukuru... (LHH HLL) 'The man is the big one (who...)' (no lowering occurs here, with or without a pause; instead, crescendo is found.)

The second sandhi rule is a raising--or a high tone spreading--rule which affects an initial low tone. As described, if a word final syllable is high, the initial low of a following word is raised if and only if it is immediately followed by another low. In other words, the high of the final tone spreads onto the initial tone of the following word, if that word has a #LLX configuration. This rule can be expressed formally as: $L \rightarrow H/XH\# \#_LX$. It must be noted that crescendo applies after high tone spreading has occurred. For example:

a) mbudzi pfumbamwe (HH HLL) (pfumbamwe is LLL) 'nine goats'

b) Ari kuenda. (HH HLL) (kuenda is LLL) 'S/he is going.'

If the word initial low is followed by a high, the rule does not apply³⁰. See a) and b) below, for example:

a) mbudzi nomwe (HH LH) (nomwe is LH) 'seven goats'

b) ari kuuya (HH LHH) (kuuya is LHH)

Again, according to Odden (1983), if the correct phonological environment exists, the rule applies even

³⁰ Recall that LH sequences of tones are not affected by grammatical--both inflectional and PS--tones.

across major constituent boundaries (NP/VP). He claims as evidence the observation that the first syllable of the consecutive (the only verbal construction, except for the infinitive, that can carry a #LL pattern), can be raised phonemically through sandhi. Odden advanced one such phrase to provide evidence that this sandhi rule is phonologically motivated by a particular tone sequence. As such, these data could be crucial to an argument that sandhi--a phonologically motivated conditioner of adjacent units--is occurring across a major constituent boundary.

Data collected for this study does not confirm that this is the case, although some of it was collected from speakers of the Karanga dialect. The example he used to support his claim--Chipo akabika (LH HLLL)³¹ "...and then Chipo cooked" was seen by the Shona-speaking linguists I consulted as being a strange construction, since consecutives used in past time contexts usually refer to the same subject³² as the main verb of the sentence. They also felt it was ungrammatically tone marked. Instead of Odden's observed LH HLLL, the tone marking for Chipo akabika was said to be LH LLLL because an initial high tone on a- could not occur on the consecutive construction, and the stem tones

³¹ Tone marking and gloss is taken from Odden (1981:29).

³² The subject of the main verb is, itself, fully specified or refers anaphorically to fully specified subject named earlier in the discourse.

were not acceptable for a past participial construction (which does carry an initial high tone and could, in some contexts, be glossed 'and then X did something'). Moreover, the high tone on a- (which might be signalled by a relatively high pitch) was not acoustically supported by recorded data. In the data collected for this work, the tone on a- was not higher in pitch than its following L tone in any of the readings. Two patterns were found for the phrase, Chipo akabika:

Chipo akabika	and	Chipo akabika
L [↑] L - L [↓]		L [↑] L - - -

Odden does note that, in two instances, sandhi can be blocked. Specifically, ideophones do not undergo sandhi raising or lowering under any circumstances. He also argues, in agreement with Fortune (1984) that, under no circumstances do the demonstratives undergo raising, even though their LL form provides the correct phonological environment for raising. The latter observation was not supported strongly by the data under study here; raising occurred sometimes (resulting in a crescendo series), and not at others.

Odden (1981) further point outs that the tones of ideophones and of the emphatic demonstrative (HLL) can provide part of the environmental specification required for lower-

with ideophones. Both VPs and ideophones are preceded by at least potential pauses. Pauses are realized, more often than not, both before and after ideophones, thereby accounting for their not being affected by either sandhi process even though they can provide part of the environment required for sandhi to affect adjacent words.

In addition, Carter (Carter and Kahari, 1981, Part II:21) describes a process she refers to as secondary lowering, a boundary process not addressed by Odden, but one which was supported strongly in the data under study here. The process occurs quite often, although not invariantly, after an initial low has been raised by the high tone spreading rule. Through this process, the immediately preceding final high of the word or stem is lowered, so that the pattern XHL# #HLX results. She gives as an example:

...chisina mhinzo (LHH HL) goes to (LHL HL)
 "... (it) has no sharpness" (the pair of the scissors,
 cf mhinzo LL)

Here, the initial tone of mhinzo "sharpness" has been raised by the high tone spreading rule. The final tone of chisina "It has no..." is subsequently lowered because it is between two highs and is immediately followed by a morpheme boundary.³⁶

Meeussen's rule (Meeussen, 1963), which applies to a number of Bantu languages in the area, as Carter (1962,

³⁶ It is interesting to note that whether a secondary lowering is realized or not may be significant with respect to focus, a point discussed in Chapter 4.

1971, 1972), Goldsmith (1984), and Myers (1987) have pointed out, lowers a high after a high. At stem and word final boundaries in Shona, what Fortune (1984), Fivaz (1970), and Odden (1981, 1986) have described as lowering sandhi, could be seen as one particular realization of Meeussen's rule. A H is lowered after a H, as in the Meeussen generalization, but is restricted in occurrence to those followed by another high at word boundaries or at the boundaries of a stem followed by a word within a single phrase. As a matter of fact, Myers (1987) refers to this special subset of Meeussen as "slip," which he describes as a H lowering between two Hs. He demonstrates that "slip" applies not only to word and stem boundaries, but also to the inflectional morphemes within verb phrases³⁷. Myers' formulation captures the observation that the lowering--whether within or between "grammatical words," as he refers to them--is a reflection of a single process applied to what he sees as different structural environments.

To sum up, within phrases, there seem to be two basic processes in operation: 1) a lowering, or a high tone dissimilation, process, which lowers a high after a high (a statement which includes Meeussen's rule, Carter's secondary lowering, and Myers' slip, which occurs between two highs) as well as to the lowering of grammatical Hs like se-, ne-,

³⁷ Recall, as well, Knappert's (1961) deflected tone discussed earlier in the chapter which did not, as Myer's analysis does, capture the boundary lowerings.

zve- and nde- when they immediately precede a surface H tone; and 2) a raising, or high tone spreading, process, in which at least one low is raised after a high and before subsequent lows. It is worth noting, as will be seen in Chapter 4, that the first of these processes creates a potential for a HLH sequence, if the morpheme immediately following the lowered tone is high tone initial. The second establishes a potential environment for crescendo to occur, through which, as was seen in Chapter 2, each of a series of Hs which is followed immediately by a morpheme final L rises successively in pitch. It is also important to note that no inflector affects words or stems carrying the initial tone pattern LH, in any verbal or nominally headed phrase, and that, while sandhi lowering can create a LH pattern, neither sandhi raising or lowering can eliminate one.

It was noted, in the course of discussing both verb phrases and phrases with nominal heads, that the semantic and functional meanings of phrases which shared stem or word patterns were varied. It was observed that, given a tonal analysis of phrases, shared meanings and functions among the members of a group that pattern similarly, were difficult, if not impossible to specify.

Finally, the observation was made that PS tones and the invariantly high inflectional tones like the Va- and sa- proper noun prefixes do not change when prefixed by grammatical tones. It was noted too that, unlike most stems and

words, emphatic demonstratives, selectors, pronouns and past time participials do not shift tonal patterns when prefixed by an inflecting H, even though they provide the phonological environment which prompts change in other inflected forms.

The next chapters will discuss possible implications of these observations and offer an alternative way of looking at these phenomena.

CHAPTER 4

PITCH

As briefly shown in the last Chapter, there has been a relatively large body of work which has contributed greatly to the understanding of the tonal system of Shona. In all of these analyses, roots, stems, and words--the latter being defined as words either phonologically (first, by Doke, 1931, as Myers, 1987, points out) or grammatically in ways which are expressed through phonological domains (by Myers, 1987)¹--have been the focus of attention. Word boundaries do--or juncture does--become relevant to the sandhi processes described. The general understanding is that morphology assigns the tones to the roots and stems of words. Inflectional morphemes, if high, affect these tones. And then, phonological--or tonological--processes or rules apply which further affect the realization of tones, particularly at word boundaries.

At least implicit in most of this work is the notion that the grammatical phrase--particularly in the case of the copula, ne-, se- and zve- phrases, and the verb phrase--is tied in with the realizations of tones. But, in these

¹ Myers defines the word as a grammatical entity in Shona, whereby a verbal inflection, including the object concord, if it is present, comprises a word.

analyses, the pitch levels within the H and L tones of the phrase itself, as this term is opposed to the word,² have been only tangentially relevant as an object of description.

Previous accounts share three strong, but often unstated assumptions: 1) that morphology and phonology, respectively, motivate and condition the tones that are spoken and heard. From this, it is easy to conclude 1) that these two levels of structure, together, create their realizations; 2) that only tone, among all possible suprasegmentals available to Shona speakers, signals structural meaning in Shona; and 3) that it signals lexical, grammatical and syntactic meaning. In other words, the possibility that "intonation" or "accent"--that is, meaning bearing, linguistically relevant contours, in the first case, or markers, in the second--which reflect structures larger than words might be significant in an analysis of Shona sentences does not arise.

The data base of this study suggests that not only tone, but gradient pitch levels as well as pitch shapes are relevant to phrase structure identification, but, in the previous work out of which this work arises, tone patterns, to the exclusion of pitch patterns, are described as being the markers of citation forms and phrases alike, which, in these descriptions, are essentially synonymous. That is,

² See discussion in Chapter 5.

both citation forms and phrases comprise words, and, as such, are marked by morphologically motivated tone. Fortune (1985), for example, speaks of "tonal morphemes" which spread in patterned ways over "the word," which comprises phrasally inflected forms of verb stems and nouns. In none of these works are pitch realizations seen as being relevant to the identification of phrase structures.

Those pitch patterns which have been described as applying to units larger than words are sentence or utterance level patterns. These are described as downdrift, which, broadly speaking signals thought groups, or sentences.³ These larger-than-word-unit patterns are seen as being purely automatic reflexes of the phonological system. They are described as not--except that they ultimately function to mark thought groups or sentences--contributing to linguistically relevant meaning in Shona utterances.

In this chapter, I will address these pitch realizations. A number of the tones and tonal patterns discussed in the preceding chapters, which have been consistently described as "morphologically motivated tones", are reanalyzed here as phrasal pitch patterns which are realized through morphologically assigned tones. The pitch patterns are seen to motivated, not domino-like by the sequence of morphemes, but by phrase structures.

³ See, for example, Fortune 1984, 1985; Hodza and Fortune, 1979; Carter and Kahari, 1979; Chimhundu 1983, 1989.

There are at last two ways of looking at the forms of phrasal pitch patterns. First, the patterns could result from a set of phrasal melodies or configurations which are imposed on and spread over the tones of various phrase structures regardless of their length, such as would occur with intonation "tunes" which are commonly described for intonation languages like English⁴. Second, they could be described as systematically falling around a "peak pitch," the placement of which would help characterize the phrase structure at hand, such as would be seen with a theoretical construct such as "accent", which is commonly described for stress languages like English⁵ and which describes a syllable's relative prominence along at least one acoustic parameter.

I will argue that phrase structures, which reflect the focal and logical relationships among the units of information in speech, are signalled both segmentally and suprasegmentally in Shona, and, in a number of cases, are signalled uniquely through suprasegmental markers. In this view, it is the abstract phrase structure which motivates the selection of both segmental and suprasegmental patternings as a reflection of the organization of logical and focal relations in Shona speech. Emphasis will be placed here on the

⁴ See, for example, Crystal (1969), Ladd (1981) and Cruttendon (1986).

⁵ See, for example, discussion in Leben (1973), Ladd (1981) and Cruttendon (1987).

levels and shapes of the pitches which are realized in the main body of data gathered for this work. It will be argued that the placement of distinctively realized pitches co-occur with, and reinforce the identification of,⁶ segmentally realized structures, when they do not signal them uniquely.

It is important to notice that, in my discussions of earlier works on tone, I have generally avoided the use of the word "pitch", because the rules and processes I have referred to earlier, except for downdrift, refer to phonemic tones, and not to the various pitch levels which occur in the utterances recorded. Tones, because of their level of abstraction as tonemes, are binary in Shona. Pitches, because of their inherent gradience, as noted in Chapter 2, are not.

Particularly in the course of this work, I have developed an enormous respect for the care, patience and meticulousness of those scholars who have managed to extrapolate and identify from the pitches of Shona speech two phonemic tones and three phonologically motivated rules or processes of tonal assimilation and dissimilation. I am -- when faced with the data--reminded of Bolinger's (1972) aptly titled response to the description of English sentence stress in Chomsky and Halle's (1968) Sound Patterns of

⁶ For a particularly good discussion of this reinforcement function, see Woodbury (1985).

English: "Stress is predictable...if you're a mindreader".

The data under study here tells me something similar: "Tone is predictable in Shona...if you're a mind reader." In this data, for example, there are cases of six or more "tones" occurring at the same pitch level. Some of these pitches are supposed to be representative of L tones, and others of H tones, and yet they occur in speech at the same pitch level.

For example, the following is taken from Reader E's reading of passage h8⁷. Pitch shapes are marked iconically, as described in Appendix A, immediately under each syllable of the words in the sentence, and the phonemic tones, justifiable by earlier analyses, are found immediately under them. The phrase structures are described immediately above the gloss:

Handina	mwana	anoroora	MuNdevere...
L ɿ -	L -	- - - - -	ɿ L ɿ ɿ
L H H	L H	L H HH H	H L H L
Neg-SC-V	NP	Relative/Pres Hab.	NP Proper N
I <u>have</u> no	child	who marries	an Ndebele person.

⁷ Readers are identified by upper case letter and passages are identified sequentially. Bare numbered passages are from the first data set, and the code h# (h followed by a number) refers to passages taken from the second. Within each passage, each sentence is labelled sequentially by a lower case letter. Numbers preceding or following exemplifying data in the body of this work refer to the passage and sentence number from which they were taken. These are found in Appendix B, with translations in Appendix C.

The high-toned final vowel -a of mwana and the high-toned syllables of anoroora in this sentence, that is, -noroora, are realized in this reading at the same pitch level as the low-toned mwa- of mwana. That is, the distinction between H and L tones is acoustically neutralized in the realization of the pitches of this sequence. The sandhi rules which apply to tones in Shona do not account for Hs phonemically lowered after a L, and yet the pitches are not distinctively raised over any of the low tones in this object noun phrase until the mu- of MuNdevere is reached. Data from all five readers, with a number of different types of structures, show that this type of tonal neutralization can and does occur often in speech⁸.

Even downdrift, by which a H or a series of Hs is lowered phonetically relative to previous highs when it follows a L, cannot account for why both preceding and succeeding Ls are realized at the same pitch level as the intervening Hs, as they were in the example above. Downdrift is realized in Shona through a series of increasingly lowered tonal steps, as Chimhundu (1983; 1989) refers to them, or tonal terraces, a term used often by Fortune and others. It functions, roughly, as a sentence marker, as noted earlier, but, of course, it is realized within the words and phrases which comprise the sentence as well as across word and phrase boundaries. Between pauses, it can

⁸ See Appendix B for additional examples.

only be interrupted by a sequence of highs, whereupon, at the the next LH step boundary, the lowering process begins again, and the H of the step onset is realized at a lower pitch level than any earlier Hs within the downdrift group. The lowering process continues, step by step, until the end of the sequence of phrases comprising the thought group is reached.

Both high and low tones participate in the realization of downdrift. In the the following examples, each step onset H is numbered above the phrase marker abbreviations. Note particularly that each phrase within the two sentences contains at least one H which is either utterance initial or immediately preceded by a L.

- a) Aida kuona shamwari yake. "She wanted to see her friend."
 HL H LH H L H L H H

┌ ┐ ┌ ┐ ┌ ┐ ┌ ┐ ┌ ┐ ┌ ┐

1 2 3 4 5
 MV INF N POSS+Stem

- b) Ndakaswera ndichitaurirana nemhuri yangu. "I spent the day talking with my family."
 L H H L L H LL L L L L H L H L

┌ ┐ ┌ ┐ ┌ ┐ ┌ ┐ ┌ ┐ ┌ ┐ ┌ ┐ ┌ ┐ ┌ ┐ ┌ ┐

1 2 3 4
 MV PART ne+N POSS+Stem

As the examples show, a high tone is realized at a slightly lower pitch level than earlier highs in the phrase or sentence after a low tone. That is, the presence of a phrase internal low pulls down an immediately following high. A

second immediately succeeding high does not drop further in pitch.

Lows may drop when they occur in succession as well as after a LH sequence. Compare, in addition, Chimhundu's (1983:200) example of an unusually long series of uninterrupted lows, shown here as he marked them in the text, in (a), and two other phrases (b) and (c), in which the same number of syllables are interrupted by highs:

(a) kutarisa vanhu murongomuna

— — — — — — — — —
 L L L L L L L L L L L
 INF N LOC

'to look at a group of 4 people'

(b) kukanganwa mazwi aakanyora (48)

L — — — L L L L L L L L
 L H H H L H LH H H L
 INF N REL-PART

'to forget the words that he wrote'

(c) kukanganwa mazwi akadzidzwa (49)

L L — — — L L L L L L L
 L H H H L H L H L L L
 INF N REL

'to forget the words that were studied'

There is a departure from the previous descriptions of how downdrift works in Shona observed in the data collected here, however. It often happens that Ls following Ls do not drift down tone by tone, as they "should," if descriptions of downdrift in Shona are accurate. According to Fortune (1984) and Chimhundu (1983; 1989), a L following a L is realized at a lower pitch level than the preceding low. However, the data revealed that, in these passages, at any

rate, the LLL sequential lowering--syllable by syllable--was relatively rare, even within the data provided by each speaker. More often, Ls would lower morpheme by morpheme, and in a number of cases, a number of Ls would stay at the same pitch level for three or four morphemes and would only lower at the phrase-final morpheme. For example, in passage h62:

Saka	atobviswa	pachigaro	kukaiswa	mumwe
—	—	—	—	—
L L	H L L L	L L L L	L L L L	L L L
CONJ	MV	ADV	CONSEC	ENUM

So, he has just been removed from the post and there was appointed another one.

Here, if the downdrift lowering pattern had held "properly," the 13 sequential lows would have drifted downward at each succeeding low tone. However, this did not happen here.⁹ Instead, we see here and in the data which comprises Appendix B, that sequential lows in these contexts only very rarely drifted down tone by tone.

In addition, some Hs are extremely high compared with others in the same environment, and some Ls are markedly low --even when they do not have a depressor onset. And then, there were key drops, in which the key--or overall pitch

⁹ It could, of course, be argued that this phenomenon results from a "reading intonation pattern" imposed on the main body of data. This will have to be explored further as work on the suprasegmental patternings of Shona proceeds, but that all readers typically handled sequential lows in the same manner seems to be significant.

level--of a phrase within a sentence drops down lower than would be expected, given the normal terraces which occur predictably within the process of downdrift. Occasionally, there were key raises--within the sentence--directly violating what downdrift is "supposed to" accomplish: systematically, step by step, to move the pitch level of the sentence lower and lower until the sentence or utterance boundary is reached.

And pitch registers were sometimes very broad--taking up the speaker's full pitch range--or very narrow, taking up only a very small portion of that potential range, or somewhere in between. If the evidence from the data is generalizable, then pitch variations seem not to be restricted to highly emotional contexts¹⁰.

The question arises: What, other than affect--and/or morphological tonal assignments and phonological conditioning, could be motivating the pitch variations which occur in the data? It will be necessary to examine the

¹⁰ There is additional evidence that affect was not the primary motivator of the pitch, key, and register variations in these contexts. This is suggested by other aspects of the data, which indicate that, in Shona, the suprasegmental realizations of emphasis, an affective factor, for example, affect syllable lengths and consonant onsets most noticeably, rather than pitches. Yes/no questions without the here question marker were characterized by a very high key and a very narrow register throughout the portion of the sentence being focussed on in being questioned. I will not attempt to address matters such as key and register in this work, other than to mention that the data indicates that what appears to be key and register seem to occur in Shona and that variations may turn out to be meaning bearing in a discourse based analysis.

shapes and levels of the pitches of structures larger than out-of-context words and phrases to even make a beginning.

In the passages under consideration here, one thing that can be, but is not always noticeable about the shapes of pitches in Shona is the shape of Hs which are utterance initial or immediately followed by a low. If such a high is a single H, followed immediately by L (i.e., xLHL, #LHL or #HL) it rises slightly from the leftward endpoint, levels off and then lifts again slightly at the rightward endpoint, a shape which is represented iconically by [↗]. The immediately succeeding L falls off from this peak [↘]. Since the onset H spreads over a single syllable, it could be referred to as a "short H."

A "long H," a series of Hs making up the onset H, can take one of two patterns. If the H is followed by other Hs, and then by a L within the group of tones between the tonal step LH boundaries, the first H often rises slightly and levels off [↗], as does the next [↗], and the last of the series takes the peak [↗]--creating a crescendo. This type of patterning is represented here as: [↗↗↗].

For example, in the citation form mkanganwi, "the forgotten one," the tone pattern LHHL is realized in this way: [↘↗↗↘], with the dot representing an extra degree of length. In the clause nokuti ndiri kuverenga, "because I am reading" LHL LH HLLL, the same pattern occurs:

nokuti ndiri kuverenga

$\begin{array}{ccccccc} \text{L} & \text{H} & \text{L} & & \text{L} & \text{H} & \text{H} & \text{L} & \text{L} & \text{L} \\ \text{CONJ} & & \text{MV} & \text{PRES} & \text{PROG} & & & & & \end{array}$

It is important to note here, that the ndiri and the ku- are linked together into a phrasal unit here through the tonal patterning of the crescendo, which is created by high tone spreading. Note, as well, that there is no penultimate length in ndiri. There is, however, a junctural "break," described in Chapter 2, between the peak pitch of the ku- functor and the initial syllable of the low lexical stem -verenga. This break separates the crescendo H sequence from the following Ls and the grammatical markers ndiri ku- from the stem -verenga. This type of break can be compared with the breaks found in English which mark word juncture. Marconnes (1931) gives an excellent English example which is similar to the break found between ku- and -verenga in the example above with his my tea versus mighty.

The other long H pattern contrasts with the two examples above. In the citation form kukanganwa "to forget" LHHH, for example, a high-final series of highs stays fairly level, to the extent, at least, that it, unlike the low-final series, does not "crescendo." Rather, the H tone pitches following the peak, which rises, "echo" or reduplicate the peak's pitch level. That is, the pitch pattern, as Fivaz (1970) notes, is: [L H H H]. It may also occur as

[_L↑--] in context. If an extra degree of loudness occurs in this pattern, it occurs on the leftmost high.

The high of a "short" high, a H surrounded by Ls or located between utterance initial position and a L, may be prominent. By prominent I mean that it is noticeably higher than the immediately surrounding pitches and is characterized by a slight raising at the rightward endpoint of the pitch. The syllable carrying the peak pitch is often a little louder as well, and it is sometimes even set off from the immediately preceding or immediately following syllable by break, as in the ndiri ku'verenga example above, where the apostrophe marks a peak pitch in the immediately preceding syllable.¹¹

In the first sentence of passage h8, there are three short highs in the phrasing which makes up the comment:

...mu'nhu kwa'ye chai'ye "...she's a very proper person."¹²:

	Munhu	kwaye		chaiye.
	H	L	H	L
	COP+N	POSS+PRO		POSS+PRO
Reader A:	↑	↓	↓	↓
Reader B:	↑	↓	↓	↓

¹¹ Apostrophes are not part of the Standard Orthography and, when they are used here, they are used to clarify peak pitch placement. Marconnes (1931) used the apostrophe similarly, although his reference is somewhat different, as will be seen in Chapter 5.

¹² This is an ineffective gloss in English, but is as close as we could come. The sense conveyed in Shona is highly complimentary.

Reader D: ʃ ʌ ʃ ʌ ʃ ʃ ʌ

Reader E: ʃ ʌ ʃ ʌ ʃ ʃ ʌ

Here, there are three examples of "short" step onset highs, one of which, the one on mu- of munhu, is significantly higher, carries the characteristic rise at the rightward endpoint and is a little louder than the others. This could be appear to be the most prominent syllable in the clause for two reasons. First, it is phrase initial (in the discourse, it was preceded by a noun modified by a relative clause). As would be predicted from work which describes downdrift, phrase initial highs are usually higher in pitch than other highs in the utterance. But the form munhu carries the copula PS tone, which marks a structure which, in Shona, functions as a focussing device.¹³ Since the form carries narrow focus, that which is often expressed in English by so-called contrastive stress, there is a possibility that the structure denoting narrow focus could reflect prominence along some acoustic parameter which would support the segmental realization of the structure in signalling that function.¹⁴ Note that, in the case of this example, there is no break between mu- and -nhu, but, in all readings, the mu- is prominently high, characteristically

¹³ For discussion, please see Chapter 5.

¹⁴ Access to accurate machinery and task-focussed data construction will be necessary to test whether or not copula Hs are slightly higher than others at equivalent positions in utterances, but, impressionistically, this seems to me to be the case.

rising and, relative to the other syllables in the phrase, is somewhat louder.¹⁵

Similarly, "long highs" showing the same types of prominence are found in examples like this reading of vana vakaenda kumafuro "Some children went to have some fun" (hl0):

vana	vakaenda	kumafuro
L H	H HH	L L L L L
L	┐ - - ┘	L L L L L
NP	MV-PERF	LOC

In this particular example, -na vakae- all carry high tones after the low of va- in vana. The -e- of vakaenda, is the final high in the series, and it is prominent, as described above. This is over and above the prominence of penultimate length, which also happens to be realized on this syllable and is a prominence of interactions between a relatively high pitch level as well as its rising-levelling-rising shape, plus loudness and break.

The location of the prominent H which is utterance initial or immediately follows a low, is interesting in at least two ways. First, as has been noted by Fortune (1984), Hodza and Fortune (1979) and described in some detail by Chimhundu (1989) in his exploration of formal aspects of modern Shona poetry, a LH sequence marks the beginning of a

¹⁵ Relative higher pitch here and greater breath force do not, as can be seen, correlate with extra length here. Both syllables of munhu are somewhat shorter than even the unlengthened syllables in the two following words.

tonal step, the means by which downdrift is realized in Shona utterances. The initial H of a tonal step is somewhat lower than the preceding Hs in the utterance. Step by step, it will be recalled, the utterance is lowered in pitch, and a H realized near the end of an utterance is often realized at a pitch level which is even lower than the utterance-initial L. This, taken by itself, is not particularly fascinating, as Chimhundu (1989:36) notes:

At the time of writing, the writer's impressionistic view is that the division of the utterance into tonal steps is mechanical and insignificant. It occurs at the phonetic level and its boundaries are predictable.

However, it comes to be interesting when one recognizes that tone lowering processes in Shona create a great number of LH sequences--and thereby tonal step onset Hs--usually at morpheme boundaries.¹⁶ These dissimilation rules, which apply most often to inflections, create the tone step onset sequence LH, at least once in almost every type of inflected phrase.¹⁷

The recognition of this result led to my considering them in terms of the relative pitch heights of tones following LH sequences, rather than, as before, considering them solely in terms of the pitches preceeding them. The

¹⁶ A few structures (such as participials, ha- initial negatives, some forms of the subjunctive, a six-member set of stative verbs and imperatives) call for stem internal step onsets.

¹⁷ Infinitive and consecutive forms of L verb stems, however, do not contain a LH sequence.

obvious possibilities for the pitch height of the first syllable of a step onset relative to succeeding pitches are: 1) higher than; 2) equal to; and 3) lower than. In the first case, that H would be a "peak pitch" within the phrase, which had, often, been created by phonological conditioning processes. In the second, the H would be echoed¹⁸, or reduplicated at the same pitch level. The initial H of this type of series, typically, was realized with the characteristic rightward endpoint rise. Finally, succeeding pitches could crescendo, leaving the peak pitch on the rightward end of the H tone sequence. All three patterns are common in the data base.

If there were more than one LH sequence in the phrase, the first of these (the one closest to the morphemes carrying grammatical information) carried the highest pitch in the phrase. The onset H of a second LH step boundary was the second highest pitch in the phrase, or a "secondary peak," on analogy to secondary or tertiary stress in stress languages like English, but, in the data, with prominence expressed primarily through pitch level and shape.

The initial H of a tonal step--a "short one" or one of the endpoint Hs of a "long one"--is the pitch which can be,

¹⁸ Carter (Carter and Kahari, 1974; 1979) uses the term "echo tone" in a slightly different sense, in which the echo could remain at the same pitch level or reduplicate at higher levels. Here, echo pitches are those which merely bounce off of and copy the peak pitch. They cannot be realized at a higher pitch level.

and often is, prominent. The data did not show a word or phrase in which there were more than two peaks. In those inflected forms which carried two--for example, past time participials and ha-inflected negatives--the earlier one in the phrase is stronger than the later one. There were several examples of structures with no peak at all, such as infinitive and consecutive forms of low verbs and a number of uninflected nouns. A number of infinitives, such as the ndiri kuverenga example above, acquired a peak through sandhi raising.

A number of peak pitches in the data were created by boundary processes. In this excerpt from h13, for example, there are six step onset highs, four of which were short. There were two very prominent syllables in the sentence. The first, and most prominent in the sentence, was the -o- of rakaorera. The stem -orera is L in citation form, and the -o- is the last H of a step onset series of Hs. The next most prominent was the chi- of chibage, which had been raised by sandhi. Their prominence came from pitch height and shape, and both broke briefly before the next syllable. Each, too, seemed to carry greater breath force:

Bani iro rakaorera zvokuti rinogona kukudza chibage chaizvo.
 H L L L H H H L L L H H H L L L L H L H L L L H L L HL L L
 1 2 3 4 5 6
 N DEM MV-STAT CONJ MV-HABIT INF NP ADV-MAN
 That vlel is fertile such that it can produce corn very well

It is important to note that, in this sentence, that

there are two instances of the "secondary lowering" referred to in Carter and Kahari (1979): with the final tone of kukudza and the final tone of chibage.¹⁹ In this reading, the -dza H is lowered completely, and is followed by the prominent chi-. The high tone of -ge is suppressed and is left with a "pitch hump" in the middle of the tone. The cha- of chaizvo carries a peak rise at its rightward endpoint and is followed by break and a slight lowering of -i-. Both the chi- of chibage and the cha- of chaizvo mark step onset Hs, which would not exist without the secondary lowering; that is, with only the "ordinary" tonal assimilation and dissimilation processes applied. Without the "secondary lowering"²⁰, the tonal patterns would be LHH HLH LHL for kukudza chibage chaizvo²¹, putting step onsets at -ku-, -ge and -i- in the three words respectively. In this

¹⁹ -kudza is a H verb stem and chibage carries LLH in its citation form.

²⁰ Since it is lowered between two Hs, Myers' slip would cover this phenomenon. Yet, as I hope I show here, this does not seem to be a phonologically motivated phenomenon. Rather, it seems to be motivated by discourse factors, particularly because HH# #H sequences which have been created by rule do not always show slip. Chibage could, for example, have been interpreted by the readers as new information, and marked suprasegmentally as such. The shifting leftward of the peak of chaizvo may well have a discourse function as well, since it is a relatively unusual articulation. What, precisely, such phenomena reflect is a matter of speculation at this time and will have to be rigorously explored.

²¹ In a tonal analysis, these patterns are created by morpheme boundary sandhi. Citation form tonal patterns for each are as follows: -kudza, HH; chibage, LLH; izvo (PRO) HL or HH.

reading, without secondary lowering, no prominence on the initial syllables of the noun phrase chibage, nor on the initial syllable of the adverbial chaizvo, which usually carries a stem internal onset, would have occurred. Although the other readers did not make the cha- prominent in this particular example, all readers made the chi- of chibage prominent.

Within phrases--noun phrases, verb phrases, adverbial phrases, and copulative phrases--there seems to be one and only one H pitch of the step onset which can take prominence, as shown in the examples above. Which H it is seems to depend upon the identity of the structure being marked. Typically, however, the peak pitch is as close to the beginning of the marked phrase as that type of phrase structure will allow. What happens with the other highs, and to the lows, which share the tonal step with the potentially prominent high, seems to be considerably less important a cue at the phrase level than what happens to this peak high. The extreme variability of the other pitches in utterances among the readers leads me to believe that the potentially prominent peak pitch is the "tone" people use and listen for in reinforcing or signalling the identity of the structures in use. Normally, these peaks merely add redundancy to and reinforce segmentally realized structures, but, as has been noted, there are many cases in which, without these pitch signals, structures--and therefore how

information units are organized around nouns and verbs--are multiply ambiguous.

Listening to the data has led to the hypothesis that there are three important cues listeners listen for in interpreting utterances: 1) where the onset H is placed; 2) whether it is short or long; and 3) if long, which of its endpoint pitches carries the peak. If the hypothesis is correct, this could help to account for the variability of the lexical tone assignment in utterances.²²

It may be that there is a syllable in each onset H which has at least a potential for prominence which can be highly significant for interpretation.²³ In the data, the realization of the potential peak generally does not vary significantly among readers unless different structures are being interpreted. The pitch level realizations of non-peak pitches, on the other hand, vary enormously.

And yet, despite their apparent importance for structure marking, onset Hs can be neutralized. In the data I

²² This is noted particularly by Mkanganwi (1972; 1990), who reports that, in some dialects of Shona--specifically a subdialect of chiNdau and urban Harare "Town Shona"--the importance of lexical tone for the identification of words is rapidly waning.

²³ It is interesting to note in passing that, in English, lexically assigned stress levels vary enormously in the contexts of discourses as well, because of interactions with accent and intonation. The variations are systematic only when these stress levels are explored at the phrase level and above and when discourse factors are taken into account in the analysis, as Bolinger (1972), Brazil (1985), Crystal (1969, 1975), Cruttendon (1986) and Ladd (1981) have pointed out.

have, places where neutralizations occurred were the following: 1) before a realized pause and/or utterance or sentence finally; and 2) when structural markings are redundant and/or when a potentially prominent onset high has been made prominent at an earlier point within the phrase.

For example, in h3, we find:

Vanhu vazhinji kumusha/vanorohwa nemheni...

L L L H L L L H H L L L L H L

$\frac{1}{2} - \frac{1}{2} = 0$

N ADJ ADV-LOC MV-HABIT ne- phrase
People many at home are hit by lightening
"Many people at home are hit by lightening."

Here the final H tone of kumusha is, to use Carter's (in Carter and Kahari, 1979) apt phrase, "flattened" before the pause, which is represented here by a pair of vertical lines. Note that, otherwise, it would comprise a tonal step onset, because it follows a low. Here, however, it is followed by a brief pause, before the verb phrase begins. The sentence continues, and the sentence final H of mvura "rain, water" is also flattened. Note in contrast that the clause internal mvura is not flattened:

...nokuti kana mvura ichinaya\vanomira nemuti

L H L L L H H L H L L H H H H H L H

CONJ CONJ N PART MV-HAB ADV
...because when it rains they stay by a tree

...vachiedza kuhwanda mvura.

L HH H L H H H H

— — — — —

KwaZimunya kwaita rufu.

H L H L HH L L H

└'└└└└ └└└└ └└└└

POSS+PROP N MV-NEARP NP

At the Zimunya's there was a death (today).

Here, the fully-specified verb phrase contains only new information, information not previously shared with the listener. Note that, in this reading, the utterance-final short H onset remains undisturbed, as it did in all the readings. With mvura and ini, in the examples above, the highs were flattened, and, in both cases, the phrases contained old information at the level of rhetorical structure.

An exception to speaker agreement about final flattening occurred in hl6, which is shown below. This was the discourse final sentence, and two readers left the final H relatively high, but the third flattened it. The fourth gave the final tone a rise at the leftmost endpoint, but not at the rightward endpoint. This could mean the readers interpreted old and new information content differently, or, since the consonant onset of chii was heavily aspirated and very long in two of the readings, but not in the others, different interactions with emphasis--or with something else entirely--may have prompted the different readings.

Hameno kuti varume vavo vanoti chii.

L H L L L L H H H H H L L LH

INTERJ COMP N POSS MV-HAB WHQ in S.

Lord knows what their husbands say (about it).

the onset of the relative may serve to link it with the focusing structure ndiwe, which it further specifies.²⁴

It is also possible that marking the structure as "relative" suprasegmentally borders on redundancy overload here. There is no verbal clause type other than a noun phrase specifier which can follow the focusing structure in this short sentence.

In other cases, the aspect marker of relative clauses can carry strong prominence. In the following example, the initial phrase of passage h8, the relative modifies a bare noun:

Muroora	aka <u>u</u> ya	apa
L HH L	L HHH	L L
L ˩ ˩ L	L ˩ ˩ L	L ˩
N	REL	DEM
The daughter-in-law	who came	to this place

Here, the LH onset on the initial syllables of akaya was a prominent one: -ka- had a high pitch, a right endpoint rise and was relatively loud.

There is, of course, the possibility that a pronoun which carries the copula structure flattens the tonal step onset of a following relative and that a bare noun does not. This, however, does not seem to be the case. In this excerpt

²⁴ It may be relevant in this regard that Schachter (1973) has noted that relatives often serve to highlight the head noun, giving it heavier focal weight, at least in English, in addition to further specifying it. It is clear, in any case, that more published work on the functions and effects of various phrase structures in Shona and other Bantu languages is badly needed.

potential for prominence. It has also been noted that, while potential for prominence may exist, it is not always realized. It is hypothesized, given the data analyzed so far, that this may correlate with redundancy, narrow focus and/or the distribution of old and new information within the sentence. When the prominence is realized, however, to whatever degree, it is realized on the earliest tonal step onset H allowed by the phrase structure being signalled, and is signalled at least by pitch level and shape. It is often accompanied by extra degrees of breath force and/or break.

As was pointed out in Chapter 3, with morphologically assigned tones (or tonal morphemes), and phonologically conditioning rules or processes, the various inflectional tone patterns of the verb phrase in Shona seem to be quite arbitrary, and, while they are systematic, they appear to be extremely complex. Fortune, Fivaz, Donnelly, Dale and Dembetembe, as noted earlier, each posits ten to twelve "tonal conjugations" for Shona verb stems. For the prestem inflectional morphemes, Fortune (1985) posits a "syllable counting rule", described in Chapter 3, which accounts for the polar realization of these morphemes on the various verb forms. Odden and Myers, it was shown, each posit morphophonologically (in the case of Odden) and phonologically (in the case of Myers) motivated rules to account for why the inflectional prefixes are realized as they are and for

why some of the stem tone patterns are realized as they are.

However, if the notion of the placement of the tone step onset H for structure identification underlies the analysis of Shona verb forms, a more concrete, and possibly a more elegant systematicity is revealed.

Independent evidence that the placement of onset Hs is important for some reason lies in the observation that synchronic dissimilation processes seem to "conspire" to create onset highs at what turn out to be strategic morpheme boundaries, and in the case of some structures, within the stem itself. Evidence that a distinction between short and long onset highs might be relevant to the identification of structure lies in the single tonal assimilation process described for Shona, which creates phrase internal long highs from what would otherwise be short ones. The spreading of the high also serves, in many contexts, to link two morphemes more tightly because of the crescendo effect of a series of Hs when they precede a L. That the potentially salient onset high, particularly in verb forms, may be what people listen for in speech is supported in that one and only one H--of what often turns out to be one of several possible Hs within the each tonal step--may take prominence. In the data explored here, each phrase carries one or two of these and each structural type has one and only one place for the potentially most prominent onset H, which, if the

onset H is long, will occur on one or the other of its two endpoints.

While neutralization often occurs with other Hs and Ls within the form, neutralization of onset highs, when it does occur, only occurs in a very few types of contexts. The ones occurring in the data for this study occurred as described above; that is, pre-pausally, particularly when the phrase contains information which has already been specified in the discourse, and when the structures are redundantly marked or overridden by a containing structure. It is important to keep in mind, however, that such discourse factors as focus and the distribution of old and new information, not as yet explored carefully, in addition to phrase marking per se, seem, at this stage of the analysis, to interact, as seen in the examples above.

With tensed verbal inflections, a potentially prominent onset high may be on tense, aspect, object infix, at stem (or AUX) initial position, and, in a few structures, stem internally. With non-tensed forms, it may fall phrase-initially, on a non-initial negative or exclusive marker, stem-initially or stem-internally. That is, they seem to be placed just about everywhere. When the step onset peak placements are charted out, however, as they are on the next page, peak placement is seen to be highly systematic, both with respect to high and low stem marking and with respect to exposing congruities among similar structural types.

Step Onset High Peak Placements

	Position:	SC/T	ASP	SINI	SINT	Example
Main Verb	-cha-, -ka-, -nga-	H 1,2		P		taka'dzoka
		H 3	S	P		ra'ka'orera
		L 1,2		S	P	ndaka'e'nda
		L 3		S	P	aka'ba'yiwa
	-no-, -i-	H 1,2		P		ndino'uya
		H 3	P	S		a'no'kanganwa
		L 1,2		P		ndino'verenqa
		L 3	P	S		va'no'gona
	SCa-	H 1,2 &			P	ndau'dzwa
		L 1,2			P	ndano'noka
		H 3	P			a'funda
		L 3	P		S	dza'i'ta
	SCo-	H 1,2,3	P			to'koka
		L 1,2,3			P	toe'nda
Participial	-chi-	H 1,2,3		P		achi'tengesa
		L 1,2,3		P		achi'taura
	-ka-, -a-, -i-	H 1,2,3	P		S	a'kakanqa'nwa
		L 1,2,3	S		P	zvanda'kae'dza
	Relative	H 1,2,3		P		waka'tora
		L 1,2,3			P	rakawa'nikwa
Consecutive		H 1,2,3			P	akaba'twa
		L 1,2,3			---	akabvuma
Subjunctive		H	P		(S)	ti'one
		L	S		P	mu'fu'nge
Hortative		H				nga'tikanganwa
		L				nga'tibve
Imperative		H			P	si'yanai
		L			P	enda'i

SC/T=SC/TNS; ASP=Aspect; SINI=Stem-initial; SINT=Stem-internal;
H=high stem; L=low stem; 1,2,3=persons; P=primary; S=secondary; ()= peak
occurs only if the onset H is followed by a L.

NOTES: 1) Syllables followed by apostrophe carry peak pitches; 2) SC/TNS
and ASP coalesce with SCa- and SCo- inflections. Peak is marked on
SC/TNS.

One of the strange behaviors of tones which has been struggled with in various ways in the literature is the tone of the Object Concord, (OC)²⁶, which, for all three persons, is sometimes realized as low and sometimes realized as high, in polarity with the tonal category (High or Low) of the verb stem, and not in polarity either with the preceding inflectional morpheme or with the surface tone of the stem-initial syllable. This behavior is different from the other H toned inflectional morphemes, which have polar realizations with the surface tone of the preceding inflectional morpheme, or with the following surface tone. It is atypical also in that it affects verb stems in all inflections in the same ways.

Bresnan and Mchombo (1987) found that, in Chewa, a Bantu language spoken in Malawi and Zambia, the OC is used only for referentiality (in the case of first and second person) and for narrow focus on the object it represents (for all persons). They found it did not function anaphorically. If Shona speakers use OC similarly²⁷, then

²⁶ Also known as the Object Infix or Object Prefix (cf, eg, Carter, Odden, Fortune, Myers).

²⁷ The work of Hawkinson and Hyman (1974) suggests that this may well be the case. Fortune (1985:47) states that the OC adds "...prominence, emphasis or definiteness to the complement to which it refers..." providing additional support from secondary research. The data collected here does not refute the possibility, although there are not enough examples in the data base to claim support. As with the Bresnan and Mchombo data, however, OC could appear together with a specified object and was not required when no object was named in a transitive clause.

it is understandable that it behaves differently from other pre-stem grammatical markers. With OC, relative focal weights among the constituents of the entire verb phrase, or comment, are being marked, rather than the verb itself. Another level of structure, that of rhetorical or discourse structure, is reflected by the form.

With the notion of potentially prominent onset Hs marking phrase structures, rather than tones, the problem of the OC may be less of an anomaly. OC immediately follows aspect in tensed verbal constructions. In many of those constructions, such as first and second person inflections, aspect takes prominence. In those inflections where aspect takes prominence without the OC, the OC "echoes" that prominence, and, while it does not push down the highs of the next succeeding morpheme, it does raise the first of a series of lows. Otherwise, in all phrasal and clausal forms of the verb, an onset H, which is not usually the first in the phrase, begins on the OC itself.

nda-ka-i-wana "I found the particular (utensils)"
 L H H H L (Low Stem)
 lps-PERF-OC-'find'
 past

nda-ka-va-udza "I told them (the very ones)"
 L H H L L (High Stem)
 lps-PERF-OC-'tell'
 past

Within the systematic marking of copula structures, and of the adverbials, the possessive, and other high toned inflectors and markers of nouns and noun specifiers, there

is evidence that stem internal onsets tend not to be disturbed under inflection. While HH, HL, and LL onsets are all disturbed by these high toned prefixes, as shown in Chapter 3, LH stem or word onsets (i.e., tone step onsets) are systematically left undisturbed. The high toned prefix generally prefixes to these stems as high, creating two onsets on the inflected form--primary on the inflector and secondary within the stem or word. As the step onset high chart for verb phrases shows, many verb phrase types have primary and secondary onsets as well. Some of these call for a step internal onset, which is always secondary. In this way, too, in addition to those way referred to in Chapter 3, nouns and verb stems seem to be treated similarly by the system.

Interestingly, Mkanganwi (1973:60) divides lexical items into two tonal categories: high words--that is, those which contain a H in either of the first two initial syllables (or both); and low words, those which do not. Although his work does not pursue the notions of high words and low words beyond specifying the categories, the categories themselves create interesting possibilities when the LH step onset is looked at as functioning meaningfully in utterances over and above providing means by which downdrift is realized.

The common identification of most Shona verb stems into "high" and "low" verb stem classes reflects the observation,

made very early on, that verb stems fall into two categories whose tones behave differently when under inflection. In citation form as well as under the various inflections, high stems, such as -uya "come," are patterned tonally in one set of ways, while low stems, such as -enda "go," are patterned in another.

Except for Mkanganwi's suggestive categorization, there is no work that I am aware of which would suggest that Shona words--nouns and non-phrasal noun modifiers--could usefully be categorized into high and low categories as well. However, when peak pitch is brought into the analysis, this seems to be a useful categorization which would reveal a systematicity which runs through all citation forms. This is that H words and stems tend to carry potential for primary peak pitch on the immediately preceding inflector in phrases, and L words and stems carry potential for primary peak pitch on the stem.

High lexical items in their citation forms can take these initial tone patterns: 1) HH... or HL...; and 2) LH.... The citation form of low words and stems takes LL.... When a high word or stem whose initial syllable is H (i.e., it carries a word-initial step onset high) is inflected, the inflector takes primary peak pitch, and the citation form tones may (eg. as in Zezuru) or may not (eg. as in Karanga) be pushed down. When a high citation form begins with LH, that is, if it begins with an internal step

onset high, the inflector still takes primary peak pitch, and the citation form tones themselves take a secondary one. With all inflected high words and stems, then, potential primary peak pitch is generally taken by the inflector.

With H stems and words, if peak pitch is located on the inflector, one might be one step closer to explaining why there is considerable dialect variation in whether or not an inflecting high lowers succeeding highs on the inflected form. That is, one could argue that how tones following the peak pitch within the tonal stem are realized--as long as they are no higher than the peak and do not carry the endpoint rise--may well diminish in importance, making whether or not they are pushed down by the inflecting high a relatively non-significant variation.

On the other hand, inflected low words and stems, with much less dialect variation, take the peak pitch stem or word initially when inflected. When inflected, the initial syllable of these stems and words acquires a potential for peak, and the inflector, if it is subject to slip, is realized as low, or as high, if it is an invariantly high inflector. If the inflector is an invariantly H one, such as Va- and sa-, peak pitch is still on the stem or word because this series of Hs prompts crescendo, in which instance the highest pitch and the rising endpoint of the "long H" is located on the rightmost pitch of the series. Thus, in

either case, the peak pitch is realized stem or word initially, rather than on an inflector.

With the categories "high and low citation forms" combining with the notion of accent as analytical tools, then, not only does the pitch pattern dialect variation with high words begin to make sense, but the previously mysterious behavior of such inflectors as nde-, ne-, se-, and zve-, which are realized as low before a surface high, becomes less mysterious.

This Chapter has discussed the importance of tonal step onset H tones for setting potential for peak pitches at the phrase level. These onset Hs can occur either phrase initially or after a L, and they very often begin at morpheme boundaries. Rather than describing these as part of the downdrift process, as has been done in earlier analyses, I have shown that they may be usefully described as a phenomenon which helps signal and identify phrase structure. The description, in addition to exposing significant regularities about the uses of pitch in phrase marking, suggests questions which encourage the exploration of rhetorical structure for the discourse factors which may motivate them--as well as for those which may neutralize them.

CHAPTER 5

ACCENT

I have chosen the term "accent" as the term I will use to characterize the peak pitches within the phrase, which were described in the last Chapter. I recognize that the selection of the term itself may be a source of controversy,¹ since, among other reasons, specification of the form and function of "accents" is very often shaped by the forms and functions of accents in other languages, particularly as these are found in Indo-European languages. However, just as with other commonly used grammatical terms which are used with language-specific meanings--such as copula, relative, and participial--while the forms and functions of the linguistic categories defined vary significantly, they also reflect common characteristics across languages. Accent in English, for example, is associated with relative stress levels and rhythm (form), and with focus and/or emphasis (function); accent in Shona, as I use the term here, is associated with relative pitch levels and

¹ Pongweni (1990, 32-3), for example, points out: "New categories and terminology devised to handle phenomena peculiar to African languages are, of course, welcome. But using terms such as 'velarization', already well established in European and American linguistic theory, and giving them local specialized definitions (or no definitions at all), can result only in confusion and unnecessary complication.

characteristic pitch shapes (form)² and with phrase marking (function). A syllable carrying a realized accent in both Shona and English, however, are, along some parameter or another, acoustically more prominent relative to other syllables within the utterance. It is in this respect that "accent" reflects a commonality in the two languages, even though the forms and functions reflect significant differences. This commonality makes the use of a term such as "accent" one which might usefully be applied to both languages, despite the obvious other differences in form and function. Moreover, not applying a term like accent to both languages may lead to oversimplifications of one kind or another. Most significant of these in my mind is that avoiding the use of some construct which forms a category of suprasegmental marking in addition to tone at the phrase level leads to a highly complex description, as was shown in Chapter 3.

The term "accent" has a disadvantage in that it is so often associated with the acoustic parameter of loudness, something which does not seem to be inherent to the "accent" I am describing here for Shona. Shona "accent" may be accompanied by loudness, just as it may be accompanied by break, but neither loudness nor break is one of its characteristics. What is characteristic of the accent described

² It is interesting to note that Chimhundu (1989) refers to "tonal rhythm" in Shona poetry, a factor which requires additional exploration and specification.

here is twofold: 1) a pitch level which is higher than succeeding pitches and 2) a distinctive rising-level-rising pattern, which may be found on a single syllable or stretched over several syllables, such that the rising occurs on the first syllable carrying high tone and the second rising falls on the rightward endpoint of the series. Which endpoint of a series of Hs carries the peak, or accent, depends upon the structure being marked.

The term "pitch accent" is a possible name for this phrase-marking accent, but it, too, has a disadvantage in that it is typically used to refer to a suprasegmental marking which is motivated at the lexical level to mark citation forms distinctively. The accent described here does not mark citation forms--it may not even be relevant to citation forms at all, any more than sentence accent is relevant to the marking of English lexical items. However, the distinction between "pitch accent languages" and "tone languages" may well be an oversimplified distinction as McCawley (1970) has pointed out, if it can be shown that the speakers of some tone languages use pitch accent on one level of structure (eg., the phrase level) and tone on another (eg., the citation form level). This remains to be seen.

The work on suprasegmentals in English by such disparate scholars as Bolinger (1972); Leben (1976); Crystal (1969, 1975) Brazil (1985) and Ladd (1981) shows that, in

English at least, suprasegmental assignments at the lexical--or citation form--level, are distinct in character from suprasegmental assignment at the phrase level. Specifically, lexical stress is one type of phenomenon; phrasal or sentential accent is another, the latter anchored on the former but motivated by a part of the language system which does not include the citation form itself. There is no reason that I am aware of to assume that, because a given language is a tone language, the same principle cannot apply to it as well. In both Shona and English, lexical items and phrases are distinct in character. It is, therefore, not unreasonable to at least explore the possibility that they are marked distinctively, suprasegmentally as well as segmentally.

As shown in Chapters 2 and 4, pitches vary to the extent in speech that a "high" tone can be realized at a lower pitch level than even the immediately preceding low tone. If the distinction between high and low tone carries a heavy functional load at the phrase level, it seems unlikely that this would happen. If tone does not carry a heavy functional load at the phrase level, then something else must account for the phrase level pitch realizations in utterances, especially in this language where several types of phrase structures are, except for suprasegmental marking, homophonous. What has been referred to as "grammatical tone," may have less to do with tones than it has to do with

accents--phrase markers motivated at the level of the phrase by phrasal and discourse considerations.

In English, lexical stress (a citation form level characteristic) and sentence accent (a phrase level characteristic) are signalled by the same set of signals: higher pitch, greater degree of loudness, extra length, and systematic effects on vowel quality. The distinction in English between lexical stress and phrasal or sentence accent, then, is one of degree, or gradience: the primary lexical stress of one of the units in the sentence is relatively higher, louder, and longer than the other primary stresses in the phrase or sentence. And, the syllable being marked by phrase or sentence accent will not carry a reduced vowel.

In Shona, the accent which marks phrases, as seen in the last chapter, is not necessarily merely a matter of a tone which is higher in pitch than others in the phrase, as if the system operated similarly to that of English, with the term "lexical tone" in Shona replacing the term "lexical stress" in English. The pitch carrying accent--in addition to being higher than succeeding pitches within the phrase--carries a characteristic endpoint rise as well. Lexical stress and accent in English are gradient versions of one another. In Shona, gradience is relevant to pitch height, but pitch shape does and loudness and break--factors having nothing to do with pitch levels--can figure into the marking

of accents, as was shown in the last chapter. It is only in the sense that high tones serve as anchors for phrasal accents in Shona, just as primary lexical stresses usually serve as anchors for phrasal accents in English that the two systems can be seen as similar: the functions and effects on the suprasegmental realization of utterances within each system are very different; but the principles which make their respective functions and effects possible may not be as dissimilar as might be assumed.

The description and reasoning behind what I am calling accent here is very different from what has been referred to as accent or stress in earlier descriptions of Shona. Marconnes (1931), as far as I know, is the only scholar who has explicitly used the term "accent" for Shona to refer to something other than to pre-pause penultimate lengthening. While Louw (1915) and others, including Fortune, occasionally use the word "stress" and/or "accent" to refer to penultimate lengthening, there is no place else in the literature that I am aware of which uses accent to refer to anything else. Marconnes, however, describes two types of accent for Karanga: principle, or etymological, accent; and secondary, or rhythmical, accent. He sees both types of accent as being "largely rhythmical" (1931:18) and defines accentuation as:

...a special stress by which we consciously or unconsciously pick out and emphasise one syllable out of several that go to form a word or a sense group. That stress may be accompanied with tone,

i.e. with the raising or lowering of the voice, and with a certain length of the vowel, but it does not depend on either. It is chiefly dynamic, a special strengthening of sound. (p. 15)

By secondary accent, his examples show he is referring to what is usually referred to as penultimate lengthening.³ By etymological, or primary, accent, he refers to an accent which, according to his description, is placed on a syllable as close to the beginning of the stem (which his orthography defines as word) as possible (p. 15). He implies for Shona, but does not state⁴ that the primary accent may not lengthen (p. 20). Regarding the function of etymological accent, again citing Meinhof's description of Venda, it shows the speaker "...which is stem syllable, and enables him to distinguish it from prefixes or suffixes (p. 20)." In Karanga, he states, "it marks the syllable of greatest importance to the meaning (p. 23)." He notes that both types of accent are:

...but a very slight stress and sometimes even scarcely discernible. Natives themselves, when asked which syllable should be stressed in words like dzokera (root dzoka "return"), nakisa (root naka, "be good," "nice") hesitate at first. It is only when pressed to choose, that they finally give the preference for the first syllable. They always do so instinctively in rapid unguarded

³ He points out that it can, given the proper set of circumstances, fall on any of the last three syllables of a word or phrase, although he does not specify or exemplify the circumstances. Carter (Carter and Kahari (1979) observes that highly formalized modes of speech are characterized by final lengthening.

⁴ In that he uses an unspecified description of Venda by Meinhof.

speech: dzo'kera, na'kisa... The reason for that hesitation is that, first of all the stress of the accent is so slight, and secondly even in words of only three syllables there may be a double accent." (pp. 22-3)

From the point of view of this work, one problem with this analysis is that the kind of accent he seems to be describing involves stress, as in English, something which includes, among other things, at least extra breath force. Since accent in the two imperative forms cited (dzokera and nakisa) is marked, not necessarily by extra breath force and certainly not by extra duration, but, rather, by relatively higher pitch levels and a characteristic pitch shape (if and when discourse factors permit its realization), it is no wonder his informants hesitated when asked which syllable was stressed.

A second problem is that the two types of accent he describes seem to be gradient versions of the same phenomenon, which they are not. In the data under study here, length does not characterize what he calls primary accent, and pitch level, pitch shape, extra breath force and/or break are not relevant to what he calls secondary accent.⁵ Relative loudness, compared with other syllables within the phrase, does not characterize penultimate length, his secondary accent, in this study's data base and is only sometimes associated with his primary accent. Moreover, the

⁵ Unless, of course, "etymological accent" happens to fall on the syllable carrying realized penultimate length.

two accents seem to be motivated by different parts of the language system.

A third problem is that he does not recognize tone as a significant suprasegmental marker at any level of analysis of the language. This is understandable given the context of his analysis, since the common understanding at the time was that languages are either tonal or they are accentual at all levels of analysis. In addition, it is clear from his writing that he disagreed strongly with the assumptions underlying Doke's (1931) work in a number of respects, and his analysis and discussion implies that a tonal analysis, in his view, was an inappropriate one for Shona in the phrases and sentences he observed and described.

He points to such minimal pairs as these:⁶

<u>ta'kura</u> "carry!"	<u>ta ku'ra</u> "we are big"
<u>nda ri pa'</u> "I gave it"	<u>nda ri'pa</u> "I have paid, atoned"
<u>ku sa ku'ra</u> "not to be big"	<u>ku sa'kura</u> "to weed, scoffle"

Interestingly, with respect to these examples, he asks the reader, without comment or expansion, to compare the English pairs, "mighty" and "my tea" and "icy" and "I see", with the cited Shona pairs. The English examples reflect accent differences in which juncture, or what I am calling

⁶ Shown here in his orthography, in which word division separates what, in the standard orthography, appear as affixes and stems and in which, here, he marks the primary accent with an apostrophe following the accented syllable.

here "break," figures, along with pitch level, loudness and syllable length.

Aside from this comparison and his observations that primary accent is "less rhythmical" than secondary accent and that "stress may be accompanied by tone...i.e. with the raising or lowering of the voice (p. 15)," he does not specify the acoustic characteristics of the etymological accent he specifies for Shona. As a matter of fact, his description leads the reader to believe that primary and secondary stress, or accent, in Shona are analagous to primary and secondary stress in English, with primary stress being different from secondary stress only by degree; that is, in that the primary accent is a slightly stronger or more prominent version of the acoustic parameters noticeable in the secondary accent. Nor does he observe, because the framework underlying his description was not shaped by a conjunctive spelling system, that both lexical and phrasal considerations may motivate and constrain the placement and shape of his primary accent. In short, while his observation that something which could be called accentual is going on in Shona matches the observations arising out of the data collected for this study, his description, both with respect to form and function, is substantially different from the one proposed here.

Regarding form, if a syllable is "accented" in Shona, it is always at the highest pitch level within the phrase,

or sense group, and carries a rise at one or the other of its end points, or at both. The syllable carrying realized accent may also be the loudest, and it may also be preceded or followed by a break, the realization of which may be motivated by discourse factors such as focus and new information, just as discourse factors may motivate the neutralization of accent entirely within a given phrase. Realized primary accent in these examples would, following Marconnes' convention, fall on the syllable marked by a succeeding apostrophe:

ndakae'nda (h1c) "I went..."

└─┐ └─┐
lps past/perf/go
nda ka enda

kana ta'enda (h17u) "When we go..."

└─┐ └─┐
conj/lpp rec. past part/go
kana ta enda

kwava'kaenda (h57d) "where they came from..."

└─┐ └─┐ └─┐
poss/3pp past part/perf/go
kwa va ka enda

tinofanira ku'toenda (h48g) "we must go right away..."

└─┐ └─┐ └─┐ └─┐
lpp/hab./must inf/aux/go
ti no fanira ku to enda

Regarding function, accent placement primarily serves as a phrase marker, as shown in the last chapter, although, as noted, the data suggest that accent assignment can be neutralized under certain discourse conditions which have yet to be clearly specified. That is, it marks a phrase as being a phrase, as the term "phrase" is opposed to citation

form (i.e. to a word or a stem), a levels distinction suggested by Stuckey's (1979) work on Makua. It usually accompanies distinctive (CC)V morphemes which identify the type of phrase is being marked, but it may, in and of itself--as with the PS tone forms of the copula, relative, participial, main verb and consecutive/conditional--uniquely mark the type of phrase structure. Within noun phrases, it may also mark focus⁷ in [possessive+determiner] constructions, as shown in the next chapter.

The primary purpose of this chapter is to argue for a distinction between tone and accent which is relevant to the description of the phrase structures of Shona. In order to do so, it will be necessary to discuss terminology relevant to a phrase level analysis, as this is distinct from a morphological analysis of the language.

While tone has importance for the purposes of lexical identification at the level of the citation form, that importance seems to be diminished significantly when words are placed in phrasal structures (which, in turn, are placed in sentences, which, in turn, are placed in discourses). Put another way, while, at the level of the citation form, accent is not particularly relevant to the identification of Shona stems and words, it becomes significant at the phrase level because it identifies phrases. In verb phrases, not

⁷ It must be noted that the functions of accent do not seem to include the marking of relative emphasis among the pieces of information in Shona utterances.

only does accent identify phrases as phrases, it also, by its placement (when it is present) or by its absence, helps to identify which kinds of phrases have been selected by the speaker in the utterance at hand.

As mentioned above, although a number of phrase structures are marked by morphemes realized as (CC)V sequences, a number of others can only be identified suprasegmentally. It can be inferred from this that these accents are significant markers, then, of whatever focal and logical relationships which these structures may express. The data suggest that careful attention to such matters is critical to any study of Shona at the phrase level. It is beyond the capacity of the writer at this time to specify these relationships and their importance relative to one another in the production and interpretation of utterances, but the data are suggestive and it is assumed that Shona speakers do not, any less than speakers of any other language, choose and mark phrase structures randomly.

A few carefully defined non-traditional uses of terms will be used in this initial work on accent in Shona--including, of course, the term accent itself. Any non-traditional definitions of "traditional" terms and the reasoning behind my decision to use them will be made explicit. It is recognized that the use of these particular non-traditional useages may or may not prove to be fruitful. But, the value of discussing and testing them rests in

pursuing dialogue which seeks to deepen an understanding of the commonalities as well as the differences among human languages.

The choice of these non-traditional useages is motivated by an awareness that many of the terminological choices used so far in the analysis of Shona constrain these analyses in much the same way that a number of the early grammatical descriptions of English were constrained by the imposition of Latin terms for Latin grammatical categories which did not comfortably fit the grammatical facts of the English being described. In the case of Shona, the terminological misfit is particularly apparent when the phrase, and not the word or morpheme, is the object of description, as it is in this work. Terms--or useages of terms--commonly used for word level descriptions may not apply effectively to structural, semantic and/or to functional aspects of the phrasal form. As a result, levels of analysis can easily become mixed and can, thereby, lead to misunderstanding. Since this work focuses on phrase level phenomena, and on the forms that phrase structures take as they function to organize information in sentences, word and morpheme level categories, as they have traditionally been used in the literature on Shona, may lead to a procrustean description.

One of the biggest problems I have encountered with some of the terminology applied to Shona is an apparent coalescence in reference to form and function in category

names: that is, "forms" seem to be equivalent to "functions" in the common understanding of what many of these names mean, although Carter's teaching grammars for Shona (Carter and Kahari 1979, 1981) are a major exception to this general trend, since her choice of grammatical terminology, in large part, reflects what appears to be a deep awareness of and sensitivity to this situation.⁸

Previous accounts of Shona have generally focussed on the forms and functions of morphemes and words. Even though these descriptions have also carefully described phrase types, the terminology used, such as "tone," which--if the hypotheses advanced here are correct--is relevant for interpretation only at the lexical level, is also applied to descriptions of phrases. This practice leads to such descriptors as "tonal conjugations" and "tonal morphemes" which prevent--or at least impede--work that would explore the possibility that something non-morphological might occur at the phrase level in this language.

It is admitted that, when isolated word forms are described and catalogued outside the contexts of speech, whether the category name refers to form or function may not be particularly important: the category has a name and X

⁸ Her approach is to replace misleading, commonly used terms with new ones. She uses, for example, the term "stabilized nominal" to refer to what is commonly referred to as "copula," "contracted present" to refer to the "habitual," and "pronominals" to refer to "pronouns." Her departures, in my mind, are invariably insightful.

number of items fit into it because, for that language, they share a set of common formal and/or functional and/or semantic characteristics. The problem emerges as a real problem, however, when the description focuses on phrase structures. At the phrase level, particularly if one is describing a language other than the language which provides the grammatical terminology and categories, it is important to know whether one is referring to a "form," to a "function," to a "meaning," or to some combination of these when one uses a particular term consistently to cover a category of language entities.

A case in point is what is traditionally referred to as the copula in Shona, several examples of which are given in Chapter 3. Formally, the "copula" in Shona is a stabilized form of a nominal, stabilized by distinctive "tonal patterns" and/or by a set of segmentally realized allomorphs. Syntactically, the "copula" is a clause which can stand alone as a sentence. Semantically, it expresses existence, state and/or attribution. Functionally, it is a focusing device, similar in function to what fronting, cleft constructions and narrow focus accents⁹ do in English. In referring to the Shona structure as a "copula," automatic analogy is often made to the functions of "copula" in other languages which use "copula." Logic says, if the "copula"

⁹ These latter are signalled by what is commonly referred to in the literature as "contrastive stress" and are discussed fully in Ladd (1981).

in Shona functions as a focusing device, for example, and the "copula" function of {BE} in the language of English-speaking linguists does not, then this structure in Shona cannot "be" a copula; it must be a focusing device.

However, if one looks at the semantics of {BE} in its copulative function in English and other languages and the semantics of {NDI} in Shona, they are essentially equivalent: they express existence, state or attribution.

But, they are only equivalent on this semantic level of analysis. They are very different when any other level of description is brought to bear upon the categorization.

This particular problem may have arisen, in part, because the term "function" has acquired a generalized meaning in linguistics and has been used rather fuzzily to refer both to the semantics of a structure (that is, to its meaning) and to its function (that is, to its use(s)). This being the case, only misunderstandings and confusion can arise when the term "copula" is used by English-speaking linguists to describe this form in Shona. I shall continue, for now, to use the more familiar semantic term "copula" to refer to this structure (albeit reluctantly), because it is common, but I use it with the hope that explicit discussion of the term's uses and meanings will lead toward an understanding of what, precisely, it refers to in the languages whose speakers use and shape it in language specific ways, as well as toward the conventionalization of some term--"copula,"

"stabilized nominal," "focusing device" or any other term which would reflect what is shared and what is not shared among the languages in which it is found--to refer unambiguously to this structure as it is used in Shona.¹⁰

When I use the term "relative" or "relativizer" with reference to Shona, I typically use both terms formally and am referring specifically to that structure which is, in the affirmative, marked distinctively by accent placement.¹¹

In the body of data upon which this study is based, the relative functions in two ways in Shona, both, of course, at the phrase level: as a noun phrase specifier and as a specified noun phrase. For example:

Ndine mwana anoenda kuchikoro chebhodingi.

I have a child who goes to boarding school.

Anoenda kuchikoro chebhodingi mwana wangu.

The one who goes to boarding school is my child.

I make this explicit because, in English, the function of the relative markers who, which, and that is restricted to marking relative structures; relative clauses cannot serve a nominal, referential function:¹²

¹⁰ I am grateful to Prof. L. Moshi (personal communication) whose expression of a preference for the term "focusing device" deepened my understanding of the importance of these distinctions.

¹¹ That is, by what was referred to in Chapter 3 as a PS tone.

¹² I am grateful to Dr. B. Willis (personal communication) for this insight.

1. I don't know who opened that can of worms.

(Who is nominal, referential, and can be used to formulate questions.)

2. I don't know the man who opened that can of worms.

(Who is relative and functions to link specification with the head noun. It is not referential and cannot be used to formulate questions.)

Similarly, when I use the term "participial," I use the term as a formal descriptor: it is the structure which, in the affirmative, is marked by a distinctive accent placement. In the data collected, this form functions in four ways: 1) as the verbal form in a number subordinate clauses which specify certain logical relationships with a main verb clause; 2) to form past time main verb compound tenses; 3) as the verbal form in a clause which further specifies a noun; and 4) as a nominal which carries subject and tense.

1. Kana uri kuenda kulibrary, ndinodawo kukutuma.

If you're going to the library, I'd like to send you (on an errand there) please.

2. Mota yangu yanga yaramba kuvhurika dhoo.

My car, it had refused to have the door open any more.

3. Murume anodzidza pachikoro icho anoita zvino-shamisa chaizvo.

The man teaching at that school does very amazing things.

4. Vana vangu handimbozwi zvavanodzidza ini.

My children, I don't ever understand what they learn myself.

Particularly note 3 above which performs what would be called a "relative" function from the point of view of English speakers. Here, the structure further specifies the head noun as an alternative for "...who teaches..." In fact, in the data base, this clause was read by two readers as a participial and by two as a relative. One of the readers, on reflection but without explanation, replaced a participial reading with a relative reading in rerecording. In 4, the participial form functions nominally in a way which participial forms cannot function nominally in English. Here, the head noun ("what" or "the things") is the object of the main clause and is logically the object noun phrase of the specifying clause. The possessive marker zva- "what" marks the grammatical subject in this specifying clause, while -va- marks the logical object.

From these brief descriptions of relatives and participials in Shona, it becomes clear that considerably confusion can result when "participial" and "relative" are used with the functional implications these terms carry for English and other languages which use these structures. If the terms "relative" and "participial" are applied to Shona structures, they must either unambiguously refer to structures which are identified by specific formal characteristics or be misleading, as Pongweni (1990) points out. The first of these alternatives is attempted in this work.

Units of information comprise phrases, and the choices of which phrase structures are used in a sentence reflect its particular set of hierarchical and other relationships with reference to other phrases within the utterance.¹³ In phrases, the morphemes and words take on different forms in the course of expressing the relationships among the units within the phrase and among the phrases in sentences and discourses. That is, in order to express relationships, citation forms acquire "inflections"--various inflectional markers and/or systematic morpheme or word orderings--of one sort or another. Functionally, some of these relationships--the hierarchical ones--convey focal relationships; others convey logical relationships. It is clear from the large bodies of literature on English and other languages that these structures are not chosen randomly. To the contrary, the choice of structures used comprise part of the information the speaker or writer is conveying to his hearer or reader and part of the information with which the hearer or reader constructs an interpretation.¹⁴

Scholars with various perspectives on the nature and function of language units, who focus on suprasegmental

¹³ See, for example, Bresnan and Mchombo (1987) for ChiChewa; Hawkinson and Hyman (1974) for Shona; Thompson (1985), Tyler et al. (1988), Schachter (1973), Schaeffer (1984), Riddle (1986), and Green and Olsen (1989), for English; Abangma (1987), for Denya, Woodbury (1985), for Yupik.

¹⁴ See, for example, Gumperz (1983), Chafe (1982, 1984), Thompson (1985) and Tyler et al. (1988).

units, ranging from Bolinger (1978), Crystal (1969, 1975), and Ladd (1981) to Brazil (1985) on English have noted that the form and function of language units at the level of morpheme and word--that is, at the level of the citation form--very often have only peripheral relevance to their form and function at the phrase level. In English, for example, the lexical stress of words has little relevance to the application of sentence accent except that the primary stresses of lexical items in a sentence, clause or phrase usually¹⁵--not always--serve as anchors of sentence accents in systematically patterned ways which are motivated by the phonology, syntax and pragmatics of the language. Such an observation applies to Shona as well, in which, suprasegmentally, the characteristics of a citation form may be masked and even neutralized by patterns acquired at the phrase level, either under inflection (as in phrases with nominal heads and verb phrases) and/or under rhetorical structure.

In phrases, clauses and sentences, citation forms change form, always suprasegmentally and very often segmentally as well, and their function is different. That is, in the contexts of utterances, citation forms do not function entirely as citation forms. Rather, they function as units which, together with structural markings and/or orderings,

¹⁵ See Ladd's (1981) discussion of default accent, for example.

comprise phrases, which, in turn, express internal relationships within the phrase itself as well as relationships with other phrases. Since their forms are different and their functions are different as well, then, unless semantics can show that they are, indeed, the same thing, different analytical tools must be brought to bear upon them. This is particularly important because the categories relevant at the level of the citation form--the level of the "word"--may well not be as relevant at the level of the phrase, as it seems to be the case with tone and accent in Shona.

Myers (1987) devotes considerable attention in his work toward specifying what a "word" is in Shona. He points out that the typical reference to "word" in Shona and other Bantu languages is the "Dokean word," a unit which is phonologically defined by potential for penultimate length. The "grammatical word" in these languages, however, in Myers' (1987:7) view, is defined within the "the morphological and tonological domains...(which are) inextricably linked." That is, CV morphemes and tonal patterns together distinguish Shona lexical items--"words"--from one another. His observation is an important one in that he makes a distinction between phonological and grammatical domains: a given phonological definition cannot be assumed to be an appropriate defining mechanism for a grammatical unit. However, Myers' work, despite this significant insight, continues work on Shona in the tradition that sees words as "words"

(citation forms) and words as "units which comprise the phrase" being the same entities which are analyzed at the same level of analysis with the same analytical tools, an approach which is not being followed here.

Doke's phonological definition of "word"--potential for penultimate length--is a definition which applies equally well to phrases, such as in murume wangu, "my husband". In this phrase, murume loses its potential for penultimate length; this potential in the context of the utterance only exists in wangu. Potential for penultimate length is not, then, a useful tool for distinguishing "words" from "phrases." But neither is Myers' grammatical word. What is there about akatukwa "he was scolded," for example, that could, on phonological, syntactic, or functional grounds, give rise to its definition as a word? It has been shown that potential for penultimate length cannot serve as a guide for phonologically distinguishing words from phrases, so a phonological description based on "potential for penultimate length" cannot be used. Syntactically, on a more abstract level, it can be described as a phrase structure, and, since it carries both subject and tense, it can be syntactically described as a sentence: NP + VP, with a- serving a pronominal function. It can also be defined syntactically as a clause whether it appears with a-serving a pronominal function as above or with a- serving an agreement function which would link the verb phrase with a

specified subject noun phrase, as it would in the sentence: Murume akatukwa "The man was scolded" or Akatukwa, murume "He was scolded, the man (was)." But, at the syntactic level, can it be described as a "word" any more than "the man was scolded" can be described as a "word" in English? Looking at the unit syntactically, do "words" contain tense and/or aspect, and subject or agreement? Or, is it the phrase which contains such units? And functionally, phrases express relationships, and words specify what the relationships are about. The view taken here is that "words" may be inflected--by morphological markers and/or by distinctive orderings of morphemes--but inflected words comprise phrases; when they are inflected, they are no longer "words" per se.

Since "words" cannot be distinguished formally from "phrases" by the "potential for penultimate length criterion," and units like akatukwa are not, strictly speaking from a syntactic perspective, "words," it may seem, in at least such cases as these, that there is no distinction between words and phrases in Shona. However, this is not necessarily the case, as the data comprising the basis of this study suggest strongly. Phrases in Shona are marked formally and are distinguished from words formally, but not by penultimate length. Rather, words and phrases are distinguished formally because tone is relevant to the identification of words and stems, and, if the hypotheses

advanced here are correct, something else--pitch level and peak, or what I am calling accent--is relevant to the identification of phrases.

To get at what "words" are in Shona so that these might be distinguished from phrases systematically, the analyst must back up. Shona lexical items can be classified at three levels: root, stem and word. Roots, in Shona, can serve a number of functions. The root -dzidz- "study; learn," for example, can function verbally, as in ari ku-dzidza "s/he is learning" (present progressive); nominally as in chidzidzo "lesson", mudzidzi "student" and kudzidza "to study, studying," as in Kudzidza ibasa rakaoma, "Studying is hard work." The relative construction, like most other modifiers of nouns, can serve in an adjectival function, as in vana vanodzidza... "the students who study..." or as noun phrases, as in Vaidzidza chaizvo vakanonoka "The ones who were studying hard were late." Even the participial, which normally serves verbal functions, when inflected with the possessive marker, can function nominally, as in Handimbonzwi zvavanodzidza. "I don't understand what they study at all." LHLH LHLHL (cf. vanodzidza, HLHL, participial).

Stems of verbal forms consist of the root, extensions (if there are any) and a final vowel. The tonal pattern of

the root determines the tonal pattern of the extensions and of the final vowel.¹⁶ See, for example, these derivations:

- | | |
|------------------------|-------------------------------|
| 1) kufunga (LLL) | 'to think, consider, suppose' |
| 2) kukwana (LHH) | 'to be sufficient, suitable' |
| 3) kufungisa (LLLL) | 'to remind' |
| 4) kukwanisa (LHHH) | 'to be able, competent' |
| 5) kukwanisika (LHHHL) | 'be possible, permissible' |

Verb stems, with very few exceptions, are formally distinguished from other stems because they carry one of two tonal patterns¹⁷ and the final vowel /-a/, which, together, are not carried by other stems. That is, while a nominalized (or deverbalized) stem may carry a verbal tonal pattern, it will--except in the case of the infinitive, which is discussed below--carry a nominalizing final vowel, rather than the verb class marking final vowel /-a/, which, in conjunction with its distinctive tonal patternings, marks the stem class "verb," as shown in above with the root -dzidz-.

Verb stems, the citation forms for verbs, are specified morphologically as a class of citation forms, but, when they are inflected, they become verb phrases. "Word," a morphologically defined entity in Shona, may not be a relevant

¹⁶ That is, these morphemes appear to have no underlying tone and acquire it within the context of a root. The final vowel tone can be affected by sandhi processes.

¹⁷ HL1/3 and Lx, as shown in Chapter 3.

category for the description of verb forms.

Regarding the other citation forms in the language, at the level of the stem itself, there is no set of distinguishing formal features which would distinguish noun stems and the stems of non-phrasal noun specifiers; that is, from determiner¹⁸ and adjective stems. That is, there are no stem classes "noun," "determiner," or "adjective" which are formally marked as "noun stems," "determiner stems," or "adjective stems" in the same way that verbs are formally marked as "verb stems." Since nouns, and all noun specifiers--including phrasal and clausal specifiers--can serve such nominal functions as subject and object, this is not surprising. At the word level, however, these classes can be distinguished from one another formally. The formal class marker which marks [+NOUN] comprise a set of gender prefixes which control agreement with the noun's specifiers and anaphoric pronouns. If the noun is subject, its prefix also controls concordial agreement with the verb. This prefix cannot be controlled by other word level prefixes, such as those carried by adjectives and determiners. The formal class marker marking [+ADJ] is a full copy of the

¹⁸ I use the term "determiner" as that category which comprises demonstratives, selectors, enumeratives, quantitat-ives and pronominals. Their citation level forms, as shown below, pattern as a category. Their shared function, in my view, which is not a traditional one, is to further specify the nominal with respect to 1) specificity; 2) direction-ality; and 3) definiteness. A full discussion of that view is not possible here, but work on its development is in progress.

noun class marker. When serving a nominal function, of course, it controls the agreement of its specifiers and, if subject, verbal agreement, but it is not inherently controlling, as is the case with markers denoting the word class "noun."

Determiners are formally marked by agreement markers which resemble but do not fully copy the noun class markers. Like the adjective word class marker, the determiner word class marker controls when the determiner is functioning nominally, but control is not inherent to the marker itself. A final additional formal characteristic of determiners which distinguishes them from adjectives is that, unlike adjectives, determiners may--although the system does not require that they do so--cliticize to nouns and may be cliticized to phrase-markers as well. Both determiner and adjective word classes are closed.

It is only at the word level then that these classes can be distinguished formally from one another. And, since all noun specifiers can serve nominal functions, they can be distinguished from one another only on these formal grounds. All of these words can combine or stand alone to comprise noun phrases. They can also be inflected by phrase markers to indicate such logical relationships as association, the so-called "possessive" {ZVE}, the "ownership markers" {NYA} and {ZVINA}; similarity {SE}; concomitance, agency and instrumentality, {NE}; and the copula marker {NDI}.

The citation form for verbs in Shona is a stem level form, an insight captured by all Shona dictionaries and glossaries currently in print.¹⁹ The citation form for nouns, however, is determined at the word level, since the selection of the word-creating gender marker has significance as to the meaning of the lexical item. This is reflected in most glossaries and dictionaries, although Carter's work (1974, 1979) is a major exception to this generalization.²⁰

Formally defined words which comprise the noun specifiers--adjectives and determiners--while listed in dictionaries and glossaries as stems by convenience, can only be distinguished from each other as determiner and adjective categories, and each from the category "noun," at the word level. None of these categories can be distinguished functionally, since all can function nominally, and, with respect to word order, both adjectives and most determiners follow the head noun. Within the category "determiner," as a matter of fact, only words marking the highly marked [-directional, -specific, +/- definite] distinctions (i.e., those marked by pronominals and one of the enumeratives) can

¹⁹ Hannan (1981), Dale (1975, 1981a)

²⁰ Her work reflects another important insight. This is that each of the various gender markers which create words from stems add meanings to these stems in relatively systematic ways.

precede the head noun; those marking directionality and specificity all follow the noun.

Adverbs, however, must be defined functionally, that is, from their uses. They cannot be distinguished formally as a stem or word class "adverb," since stems and words from all categories can function adverbially; they are, like inflected verb stems, phrasal.

That verbs are formally defined as a class at the stem level, and nouns are formally defined at the word level helps deepen an understanding of the infinitive in Shona. At the stem level, it fits the verb class: it carries a characteristically verbal tone pattern and final vowel - a²¹ When prefixed with a class marker denoting [+NOUN] at the word level, it is formally a noun: as a noun, its citation form is a word level one; as a verb, its citation form is a stem-level one. Its nominal form, however, does not restrict its use to a nominal function. To the contrary, the infinitive is extremely flexible with respect to function. Depending on its lexical content and the context at hand, it can function nominally, verbally, adverbially, as a conjunction or as a complementizer. Its formal status, as is the case with many structures in Shona, does not determine its function by some one-to-one "matching rule," a

²¹ Under certain inflections, such as some negative and subjunctive forms, -a is realized as -e or -i.

factor which contributes to the enormous structural flexibility of the language.

Tones and morphemes comprised of (CC)V sequences together identify the lexical items under description. Up through the word level, as Myers (1987) points out, tones and (CC)V morphemes are inextricably linked. His observation in this regard seems to me to be a correct one in principle, although his analysis makes no distinction between what I refer to here as phrases and units from the level of the citation form. The linkage he refers to, I have argued, breaks down at the phrase level, and the relative importance of tone is diminished considerably, as is evidenced not only by the data shown in this study, but also by the wide variety of "tonal patternings" across dialects and even within the same speaker, as Fortune (1984, 1985), Carter (Carter and Kahari, 1974; 1979), Mkanganwi (1973; 1990) and others have pointed out. If tonal patterns were significantly meaning bearing at the phrase level, it is not unreasonable to assume that they would be relatively consistently patterned across dialects,²² and that their patterns would certainly be consistent within the same speaker at least within a given style of speech--just as any pattern carrying a heavy functional load is resistant to variation and change in all languages.

²² For an insightful discussion of the history of the Shona dialects, see Ranger (1989).

CHAPTER 6 ACCENTS AND WRITTEN TEXTS

In Shona speech, phrases are knit together not only by the more abstract conceptualizations of "grammatical structures" and "idea groups" but also concretely through phrasal pitch patterns, which appear to fall systematically around peak pitches, or accents.

In order to look at precisely how words are knit together into different types of linked and identifiable phrases, one needs to look not only at the segmentally marked (CC)V structures, but also at their suprasegmental patternings. This is particularly true for Shona, in which a number of grammatical structures without accent markers (as they would appear in print, for example) can be multiply ambiguous, even in context. As a matter of fact, Carter (Carter and Kahari, 1979:iv) points to this as sometimes being a problem for the interpretation of Shona written texts:

...the wording is that of the authors, as it appears in the original (published) works, apart from the addition of tone marks. These in some cases have entailed decisions between alternative possible readings.

The observations made in this work that phrases are, in at least some contexts, uniquely signalled by pitch realizations may be of interest to those with an interest in the

orthography of Shona. As the orthography developed from 1931, under the guidance of the Shona Language Committee, attention to punctuation in the language which arises from its own structural organization of information was not actively encouraged. In the still widely used Guide to Shona Spelling, for example, Fortune (1972:34), on behalf of the Language Committee, states this with respect to punctuating Shona:

The Shona Language Committee has recommended that 'ordinary practices of punctuation should be followed' in writing Standard Shona but it is doubtful whether all the signs used, for example, in English, are required. Further, some more guidance in the use of the common signs seems to be necessary.¹

That this approach to punctuating Shona can be a significant problem is seen particularly in prose texts, where structural ambiguity, and, therefore ambiguity among the logical and focal relations of the text can and often does arise. A number of these seem to be subtle distinctions as the following examples will show. That they seem to be subtle distinctions, however, may be misleading. They could actually distinguish important focal and logical relationships which are critical for communication. To discover what these could be is beyond the scope of the work, but the passages under study suggest strongly that, at

¹ Krog's (1982) Appendix IV is entitled "punctuation rules for Shona." There are a total of seven rules specified, all having to do with representing direct speech within a narrative text.

the least, work on the functions of various phrase types in Shona is badly needed.

Orthographies, particularly alphabetic orthographies, tend to make grammatical relations explicit even though these are often easily disambiguated by the context provided by the text, and they may even be completely homophonous in speech. In the orthography of English, for example, singular and plural possessives {s} are distinguished from each other and from the plural {s} with the placement or absence of apostrophes, even though their contexts most often clearly identify the choice of a possessive or plural structures, even in print.

"Possessive" phrases in Shona, which express association between two noun phrases, can be broken down into two parts: the prefix plus either a participial clause, or a determiner, adjective or noun. This discussion will focus upon the [prefix + determiner] construction, since it is with determiner forms, which function pronominally in possessive phrases, that structural ambiguity arises unless accent is made explicit. The prefix, which marks the association with the head noun (which is "possessed"), agrees with the head noun. The referent of the determiner is the "possessor," which usually cliticizes to the "possessive" phrase-marker. In the unmarked case, the possessive phrase highlights the head noun (which is "possessed") and further specifies it, as in Mwana wavo

anoenda chikoro icho, "Their child goes to that school."

The possessive phrase wavo (HH--possessive prefix plus determiner stem) carries a phrase-initial accent. However, when the focus is on the "possessor" as it would be if, say, "their child" were being contrasted with "our child" (mwana wedu) in the context of the discourse, the accent shifts to a phrase-internal position: that is, to create a phrase internal LH step onset, rather than the unmarked phrase initial onset.²

The full form of the determiner, when prefixed by the possessive marker, shifts focus even more strongly onto the possessor.³ When the impersonal "possessed" prefix marker is prefixed to the full determiner, the structure specifies the head noun (the possessor in this case) as being "real; proper," and carries a phrase internal LH step onset. This phrase is found in h8, for example:

munhu	chaiye
L L	LH L
N	POSS+DET
"a <u>proper</u> person"	

In the examples in the data base here, possessive

² This is one of the very few cases in which there is something of an equivalence to suprasegmental focus marking in English; that is, to narrow focus accent (contrastive stress) in English on "Their", as in "No, no--Their child goes to that school, not ours."

³ This point is made by Fortune (1984:51). In discussing his examples, Fortune describes the forms being motivated by emphasis, rather than by narrow focus, the interpretation taken here. He uses the examples, mombe dzavo "their cows" and mombe dzaivo, which he glosses "their cows--as opposed to the cows of others." This difference in gloss reflects narrow focus, in English, which can be expressed by contrastive stress.

phrases which contain determiners, it seems to be the case that when "the possessor" carries focus, for any reason, the accent moves to a phrase-internal position; it is not placed phrase-initially, as it is when the phrase highlights the possessed. In 53/4, for example, all four readings of hameno, zvavo "Who knows. That's her problem." show a LH on zvavo, with the final H rising, even though this is a sentence and discourse final H tone. In the munhu chaiye example discussed in Chapter 4 as well, the H in the sentence final LHL sequence did not flatten in any of the readings. Single Hs occurring in such final positions normally drop down, as shown in Chapter 4, unless they convey new information, are necessary for the resolution of ambiguity or, for some other reason they carry a heavy functional load. In none of the examples in the data base did flattening occur.

Within the verb phrase, as was pointed out in Chapter 3, main verbs, relatives, participials and consecutive phrases are segmentally homophonous but are distinguished through accent placement in several, including the third person human, classes. Since the verb phrase initial markers indicating subject can be used for agreement or pronominally, sentence initial verb phrases can be read as main verb phrases, or as noun-specifying clauses (relative or participial) serving a nominal function, or as consecutive phrases, if the latter is serving a conditional func-

tion. At times, preceding information within the discourse is not enough so that the reader can identify the writer's choice among these major constituent structures in advance. In all but the first case--the relatively unmarked case of a sentence initial main verb--disambiguation of structure will eventually occur as the reader proceeds into the sentence and encounters a "second" and/or a "third" main verb. The recording of the data in this study provides evidence that this may be precisely what happens. It was often the case in the recording sessions--even after rehearsal with the three readers who rehearsed--that the readers would stop in the middle of a sentence and rerecord, noting that they "had read it wrong." Lack of, or inappropriately used, sentence internal punctuation in the texts that were read aloud was, at times, misleading.

When both participials and relatives can further specify (or be) a noun phrase, there is a decision to be made: which structure--participial or relative--is on the page? Another question, of course, arises as well: Is the choice an important one? That is, do the two structures, when performing this specifying function, express significantly different relationships between the units of information? They may not.⁴ In affirmative constructions,

⁴ As a matter of fact, the structure of the language indicates that the choice may not be an important one, at least in the context of face-to-face interaction: in the negative, the two structures seem to be homophonous in every way, segmentally and suprasegmentally, although this can

however, the accents marking relative and participial are distinct, and, on the written page, they can be ambiguous.

See 19m, for example:

Murume anodzidza pachikoro icho anoita zvinosha-
misa chaizvo.

The sentence can be interpreted with either participial or relative interpretations, as shown by the glosses:

1. The man who teaches at that school does very surprising things. (relative)
2. The man teaching at that school does very surprising things. (participial)

It could be that the choice between these two structures is not a significant choice in this sentence, just as it does not seem to be a significant choice with respect to focal or logical relations in the English glosses.⁵ But, in Shona, this may be a difference that makes a difference in the relative weighting of phrases, for example, or with respect to something else, such as aspect, definiteness or specificity⁶ which might be unexpectedly significant with respect to the rhetorical relations among pieces of informa-

only be stated tentatively, since the data provided almost no unambiguously contrastive data.

⁵ In editing English text, the choice between the two structures as a noun phrase specifier is a subtle and often difficult one. As far as I know, no rigorous study, such as the one Thompson (1985) did for initial vs final purpose clauses, has been done which would expose the differences in rhetorical meaning between the two in written English.

⁶ The latter two distinctions are not captured in the glosses.

tion in the text⁷. Such distinctions might not be important in speech--where localized relationships between units of information are much more important than the more global relationships which also figure into the construction of written text--but, as Thompson (1985) points out with reference to various types of texts in English, they could be important in print.

Distinctions between such phrases as possessed and possessor "possessive" phrases, relatives, participials and others are not made explicit on the written page, in part, at least because it is recommended that "...ordinary practices of punctuation...", as these are understood to be "ordinary" in other contexts, be used in Shona text. It is true that in a large number of instances, as Fortune (1972) notes, preceding information provides enough of a context such that such focal distinctions and distinctions amongst the relative weights, or highlightings, of a head noun, for instance, can be interpreted without punctuation or other conventionalized signals being made explicit on the page.

The questions remain, however: what happens in cases in which what precedes does not provide enough information? Is it difficult for Shona speakers to learn to read Shona fluently? Is the structural subtlety and flexibility of the

⁷ Interesting work on this for English is summarized and extended by Tyler (to be presented) and Tyler and Bro (in press). See also Green (1989) and Thompson (1985) for English, and Abangma (1987) for Denya.

spoken language being constrained in print in important ways because of the way it is represented on the page?

In a number of instances in the data studied here, there turned out to be sentences that, even in context, were structurally ambiguous. In h10c, which was the opening sentence of a passage, for example, the first verb could take the relative, the participial or the main verb form; the second the relative, main verb or consecutive; and the third, the participial or relative:

Nezuro, vana vakaenda kumafuro vakaona gumbo
remunhu rakangoti ka pakadaro apo.

Yesterday (some, the) children (who went, while they were going, went) to have some fun (saw, who saw, and saw) a person's leg (which just lay, just laying) like that over there.

In speech, as Chimhundu (personal communication) points out, "Shona has a number of devices which are used to ensure that the listener is "with" the speaker." Among these devices are those which are suprasegmentally realized. And among the suprasegmental devices in Shona, there are those which often uniquely signal structure identification--phrase-marking--which, in turn, help signal the logical and focal relations of the event, process, action, state, idea, or analysis being expressed by the speaker. The meanings of these structures, which are, of course, conventionalized in speech but are often not identified in print, help create the text. Without the signals which mark these structures, then, part of the "text" may be missing.

Mkanganwi (1990:8) observes:

The wisdom of the decision not to mark for tone can be questioned on the grounds that vernacular orthographies without markings for tone can be unclear and/or confusing in many cases. It seems clear that Shona and Ndebele sacrificed tone at the altar of alphabetic economy....

The Language Committee, however, has traditionally conveyed a different view, one which is represented in the Language Committee's 1972 spelling guide. As Fortune (1972:36) puts it,

Although Shona is a tone language and conveys many distinctions purely by contrasting tone patterns on words which are otherwise the same, tone is not represented in the written language. The context is almost always a sufficient guide to suggest which tone pattern would be used in speech.

At the level of the citation form, Fortune's view is a correct one. At the phrase level and above, however, as the above sentence exemplifies, the structural organization of the information content in some cases, while it may be suggested, is far from being unambiguously clear.

Writing, as Thompson (1985) points out, is a stressful activity. In print, the writer is absent, and must stretch the capacity of the language in many ways in order to capture both local and global relationships among units of information as well as to compensate for the lack of an immediate and shared context with his or her readers. In order to communicate with a reader whom the writer may not know personally in what may be an unshared pragmatic context in other ways as well, he or she may select words and struc-

tures carefully to create a text that can be shared despite the absence of a shared and immediate context. And the reader, in the process of interpreting actively, may work toward being "with" the writer in constructing an interpretation of the text, but, the inferences which readers make in creating prose result in part from their reconstruction of the structural relations reflected in print. In Shona texts, because structures represented by CV structures can be multiply ambiguous, unambiguously clear identifiers of the structures which have been actively--and carefully--selected by the writer are often absent. The text may express certain structures, but it may well not communicate them as the writer, in some contexts, intends.

A number of idea groups expressed through clauses and phrases can be realized between full stops, often without intervening commas, or even places where, in speech, a pause would indicate that "a comma feels right here." Conventionalized signals in print which would communicate the writer's selection of the structures reflecting the relationships among idea groups, because they are often uniquely signalled by accent in Shona, are not there, very often because attention to punctuation signals, at this time, is but loosely conventionalized. However, it is sometimes the case that no amount of attention to punctuation signals will disambiguate a structurally ambiguous sentence in Shona,

even when that sentence is in the middle of a paragraph of text.

The main body of data gathered for this study contained a number of passages in which one or more sentences reflected, as it turned out, structural ambiguities. These were only exposed as being ambiguous when the readers made different decisions in their interpretations. A particularly noticeable example in which the structural relations were multiply ambiguous in print is in the double-starred and underlined sentence below in h23. Although it was not constructed to be multiply ambiguous, it was interpreted differently by each of the readers.

Kudzidza chinhu chakakosha kuvanhu zvikuru vechidiki avo.**Vana vanodzidza vanokura vane ungwaru chaizvo. Vanodzidzira kuzozvibatsira mune ramangwana. Mwana kana achinge adzidza hauzombomutyira kana nokuti anenge okwanisa kuzvibatsira.

The gloss provided by the translator is:

Learning is a precious thing to people, especially to those of the younger generation. **Children who learn grow up having a lot of wisdom. They learn to finally help themselves in (matters concerning) tomorrow. A child, when s/he has studied, you will not ever fear for him/her, never, because s/he will then be able to help himself/herself.

The starred sentence glossed here as "Children who learn grow up having a lot of wisdom" is multiply ambiguous in print. This structural ambiguity showed up very clearly in the oral readings of this sentence, even in the context of the passage. Each reader interpreted the structural relations, and hence the informational, focal and logical,

relations differently.⁸ The focal relations between the topic "learning" and the subtopic "younger generation" vary. And the logical relations, including scope, between "studying/learning", "maturing/growing up/growing" and "having wisdom" varied as well. The readings obtained for this sentence in the context of the passage could have been glossed as 1 through 4 below. Each interpretation is followed by the structures of the three sequential verbal structures vanodzidza, vanokura, and vane in parentheses.

- (1) "Children studying, they grow up having a lot of wisdom" (participle, main verb, participle)
- (2) "Children studying, they grow and have a lot of of wisdom" (participle, main verb and main verb)
- (3) "Children learning, those who grow, have a lot of wisdom." (participle, relative, main verb)
- (4) "Children study, those who grow up having a lot of wisdom." (main verb, relative, participle)

Two of the readers, after recording, decided that they had not given a "proper" reading and rerecorded, unfortunately taping over the improper readings. The glosses shown above are the glosses interpreted from the pitch patterns each had finally selected.

There are other, possible interpretations as well. Among them, even in the context of this passage, are these:

- 1) Children who study, grow up (mature), those who have a lot of wisdom. (relative, main verb, relative)
- 2) Children who study, when they grow up, have a lot of wisdom. (relative, participle, main verb)

⁸ For pitch markings, please refer to Appendix B.

As can be seen, each reading differs in logical and focal relations from the gloss settled upon by the translator: "Children who study grow up having a lot of wisdom." In his translation, he selected the structure sequence relative, main verb, participial, the interpretation which most closely matched the placing of supplementary and further specification of information around a topic. This arrangement says, and means, something distinctly different from the others.⁹

The structural ambiguity of this particular sentence, even in context, of course is partly attributable to the range of semantic meanings available to users of the language within the verb stems -kura, and -dzidza, but it is important to recognize that the semantic meanings of these stems are constrained by the structures within which they are found and that additional meanings, interpretable in terms of the discourse as a whole, arise from the structures themselves..

In the readings of this passage, as in them all, there was a great deal of variation in the actual pitches

⁹ It is interesting to note that the relative used to supplement the topic of the discourse was entirely avoided in all of the oral interpretations. Readers A and D each used the relative on vanokura, but this relative linked with and highlighted the head noun of the sentence, rather than linking the subject noun phrase of the sentence to the topic of the discourse, which is specified in the immediately preceding sentence. The other readings avoided the use of the relative completely. None of the readers, rehearsed or unrehearsed, selected the interpretation of the translator.

realized. Even in the readings which coincided as to structural interpretation, the pitches realized were only similar, not identical. There was considerable pitch variation in these interpretations, and there was substantial neutralization of the phonemic H and L tonal categories. This is despite the fact that it has been these H and L tonal categories which have been seen and described as the most relevant and important meaning-bearing suprasegmental categories for Shona at all levels of analysis. In the readings of this sentence in the context of this passage and given the constraints placed on the data base as a whole, it is only through observing the placement of accent, signalled by pitch level and shape, that the various structural interpretations--and thereby the different meanings of the sentence in context--could be made.

CHAPTER 7 CONCLUSION

The dissertation has summarized previous work on suprasegmentals and tone in Shona, and has exposed a number of problems which arise when pitch realizations at the phrase level are seen as being morphologically motivated and phonologically conditioned. Not only is a tonal analysis of phrase structure suprasegmental phenomena highly complex, it also cannot account for such things as neutralizations of the phonemic categories of H and L, except at a highly abstract level. Such neutralizations occur frequently with little or no evidence that nonlinguistic factors such as the various emotions prompt them.

The data under examination here indicate that levels of linguistic structure above the lexical level may be in operation which affect the realization of lexically assigned tones in utterances. The dissertation has argued that suprasegmental assignment at the level of the citation form and at the level of the phrase are distinct, both in terms of form and with respect to function. Although the phrase level pitch patternings cannot strictly be called "intonational patterns",¹ it has been shown that they must be seen

¹ Intonation may well come into play as the exploration deepens. Yes/No questions, without the here question

as being something different from the "tonal patterns" traditionally described for Shona.

Tonal steps were explored with a non-traditional view, since it seemed as if dissimilation processes in operation conspired to create their onset boundaries, and assimilation processes conspired to create crescendo. Though these conspiratorial processes, high words and stems under inflection tended to take a peak on the immediately preceding inflector, and low words and stems tended to take it stem-initially.

I have argued that the construct "accent" is a useful term for describing a significant suprasegmental marker which is motivated at the phrase level as a phrase marker. The investigation revealed that, while most phrases have potential for accent, discourse factors, such as focus, redundancy and the distribution of old and new information, may determine whether or not this potential is realized.

The work also uncovered certain terminological misfits which demonstrate the need for careful definitions and uses of linguistic constructs which make form and function explicit and keep them unambiguously distinct, particularly

marker, for example, show a high key, a narrow register, and tonal neutralizations between the peak pitches marking the endpoints of the information being questioned. Whether this is a function of "accent" or of "intonation" or of both remains a question to be explored. That it is the information marked by the high pitched neutralized tones which is being queried suggests that focus may be the motivator for this pattern. A good example of a typical realization is found in h25d in Appendix B.

in work which explores the language at the phrase level and above. The data upon which the work was based suggests strongly that rhetorical structure is--at least in part--reflected by suprasegmental patterning in the language and that, for practical as well as theoretical purposes, discourse-based work on the forms and functions of phrase structures is badly needed. The study also suggests that additional descriptive work which focuses on suprasegmentals other than tone could well be useful in a number of areas of investigation, including the continuing development of the written language, the teaching about Shona as a first, or a second, language and in the description and analysis of poetry and other highly formalized uses of the language. Finally, if the hypothesis suggested by the data that accent, rather than tone, is significant at the phrase level is a generalizable one, work which would test the hypothesis further could be explanatory with respect to systematic suprasegmental variations in dialects and/or registers.

The work also uncovered an unexpected area for additional investigation: the apparent formal and functional distinctions between structures reflecting focus and emphasis, which, in this initial study, is constrained in part by being limited to orally interpreted written text. Asking several readers to read the data base aloud did, however, expose a number of unexpected structural

ambiguities in the text which, otherwise, would not have been recognized.

The limitations of the current work are significant. However, it has offered evidence which suggests that tone is not the only linguistically significant suprasegmental marker in Shona and that work which would explore the meanings and functions of phrase structures in discourse cannot be accomplished without careful observation of and attention to pitch and other suprasegmental markers of the language.

APPENDIX A
KEY TO TRANSCRIPTION SYMBOLS

Pitches

- └ falls, then levels off.
- └ starts level, then rises
- ┐ rises, then levels off
- level
- ┐ rises, levels, rises again
- └ falls, levels, falls again
- ┐ starts level, then falls

Duration (extra length shown on pitch line; shorter than usual shown in superscript over text line)

- slightly longer than surrounding syllables
- : usual penultimate length, when realized
- ∴ slightly longer than usual penultimate length
- :: very long
- < shorter than surrounding syllables
- << almost gone

Juncture (appears on text line)

- | juncture (break) not transparent in orthography
- || pause

Loudness

particularly noticeable extra breath force, marked on text line by an underscore

Other (in subscript under pitch line)

- ◌ devoiced
- h aspirated
- ʔ glottal stop
- ◌ slightly voiced

APPENDIX B
ILLUSTRATIVE DATA SAMPLE

Reader A

19.

19m Murume anodziidzisa pachikoro icho||anoita zvinoshamisa
 L' - - - - - L' - - - - - L' - - - - -
 chaizvo.

19n Zvinonzi akaenda kuSouth||akanotengera mukadzi wake
 L' - - - - - L' - - - - - L' - - - - -
 nevana||mbatya dzakanaka kwazvo.

19o Asi hanzi rimwe zuva vakapopotedzana nemukadzi wake
 L' - - - - - L' - - - - - L' - - - - -
 akatora mbatya dziyé akatengesa.

19p Vamwe varume hameno kuti vakaita sei chaizvo.

23.

23a "Nhai Mai va||Emma|| ko mwana wenyu mukuru ari kudziidza

kupiko?"

23b "Hoo||munoreva Joni.

h' L - r - j' y

23c HA-a||akapedza uyu.

h' r - L h' y

23d Ava kudziidza zvekurapa izvi.

r - L h' u L h' L - L -

23e Emma ndiyé« ari kudziidza kuNyatsimé uko.

h' - L L - - - h' y h' L h' y r h'

23f Gara zviya wenyū« akazopasa here?"

L - h' - - L - - L r - L y

23g "A-a kwaani.

h' L L y

23h Akangogara pamba uye.

r - - L - - j - -

23i Vagoni« zvenyū« imi«."

r - - h' - - y

46.

46c Svondo yakapera handina zvangu kwandakamboenda.

L - r - j y L r - + h' y - - h' - y y

46d Ndakaswera ndichitauriana nemhuri yangū« zvangu.

L r - - L - h' - L L L - h' - - L h' y

46e Ndakadziidza kuti chinhu chakanaka munhu||kuti

L h' y - r y h' y r - - y - - r -

umbowanawo nguva yekukurukurirana nemhuri yako.

j y - - y - h' - L L r - L L L y h' - - L y

46f Unodziidza zvakawanda.

L - h' L L - h' y

48.

48e John auya kwandiri⁴ achiedza ku⁴shamwaridzana neni.

⁴ L⁴ L⁴ - - L⁴ L⁴ - - L⁴ L⁴

48f Ava kukanganwa mazwi⁴ aakanyora||mutsamba yake

- L⁴ - - - L⁴ L⁴ - - L⁴ L⁴ - -
 yokundituka||iye.

L⁴ L⁴ - - L⁴ L⁴

48g Zvino ini handimbofa ndakazvikanganwa zvaakandiita.

- - L⁴ L⁴ L⁴ L⁴ - - L⁴ L⁴ L⁴ L⁴

52./53.

52/3f "Nhaiwe,||ko uchaenda here kunotenga mbudzi dziya

⁴ L⁴ L⁴ - - L⁴ L⁴ L⁴ L⁴ - - L⁴ L⁴ L⁴ L⁴
 nhasi?"

52/3g "Ehe||ndichaenda asi ndava kuda mbudzi pfumbamwe⁴

⁴ L⁴ L⁴ L⁴ L⁴ - - L⁴ L⁴ - - L⁴ L⁴ L⁴ L⁴
 chete||ndozotenga nehwai nhatu||kwete mbudzi gumi
⁴ L⁴ L⁴ L⁴ L⁴ - - L⁴ L⁴ L⁴ L⁴ - - L⁴ L⁴ L⁴ L⁴
 nembiri sezvandaimboda.

- L⁴ L⁴ L⁴ L⁴ - - L⁴ L⁴

52/3h Ko iwe⁴ uchatenga chii?"

- L⁴ L⁴ L⁴ L⁴ - - L⁴ L⁴

52/3i "Ini ndinoda mbudzi nomwe||chete⁴||nemombe mbiri nehwai

⁴ L⁴ L⁴ - - - L⁴ L⁴ - - L⁴ L⁴ L⁴ L⁴ L⁴ L⁴ L⁴ L⁴
 mbiri.

L⁴ L⁴

h3.

h3d Zvinonzi izvo kana mvura ichinaya nemabhanan'ana, munhu

wakafanira kungwarira mheni.

h3e Vanhu vazhinji kumusha vanorohwa nemheni nokuti kana

mvura ichinaya vanomira nemuti vachiedza kuhwanda
mvura.

h3f Mazuvano hurumende iri kudzidzisa vanhu nezvemheni.

h4.

h4e Kana uri kuenda kulibrary ndinodawo kukutuma.

h4f Ndinokumbira kuti uende nebhuku rangu iri.

h4g Ndikasari dzorera nhasi ndinoripiswa mari zhinji kwazvo.

h4h Raifanira kudzoserwa nezuro chajiye.

h6.

h6h Svondo rakapera kwaiva nemisanganho yevarimi mizhinji

kwazvo.

h6i Mukuru wemadomeni, VaGumbo, ||ndovai|taura nokudzidzi|sa

┌─┐ ┌─┐ ┌─┐ ┌─┐ ┌─┐ ┌─┐ ┌─┐ ┌─┐
varimi.
┌─┐

h6j Vanhu vose vemunharaunda yedu vakakokwa.

┌─┐ ┌─┐ ┌─┐ ┌─┐ ┌─┐ ┌─┐ ┌─┐ ┌─┐

h6k Kwakaurayiwa[«] mombe nhatu||dzekudya pamisangano iyi.

┌─┐ ┌─┐ ┌─┐ ┌─┐ ┌─┐ ┌─┐ ┌─┐ ┌─┐
┌─┐ ┌─┐ ┌─┐ ┌─┐ ┌─┐ ┌─┐ ┌─┐ ┌─┐

h7.

h7e Ini ndinoda ku|endesa mwana wangu[«] kuchikoro||chitsva

┌─┐ ┌─┐ ┌─┐ ┌─┐ ┌─┐ ┌─┐ ┌─┐ ┌─┐
┌─┐ ┌─┐ ┌─┐ ┌─┐ ┌─┐ ┌─┐ ┌─┐ ┌─┐
chiri kumunda uwo.

┌─┐ ┌─┐ ┌─┐ ┌─┐

h7f Hanzi VaMutu, ||mukuru wechikoro chacho, ||vanoziva basa

┌─┐ ┌─┐ ┌─┐ ┌─┐ ┌─┐ ┌─┐ ┌─┐ ┌─┐
┌─┐ ┌─┐ ┌─┐ ┌─┐ ┌─┐ ┌─┐ ┌─┐ ┌─┐
ravo chaizvo.
┌─┐ ┌─┐ ┌─┐ ┌─┐

h7g Maticha avo o|sé akaenda ku|koreji.

┌─┐ ┌─┐ ┌─┐ ┌─┐ ┌─┐ ┌─┐ ┌─┐ ┌─┐

h7h Uye mari yachó yechikoro haina ku|wandisa.

┌─┐ ┌─┐ ┌─┐ ┌─┐ ┌─┐ ┌─┐ ┌─┐ ┌─┐
┌─┐ ┌─┐ ┌─┐ ┌─┐ ┌─┐ ┌─┐ ┌─┐ ┌─┐

h8.

h8b Muroora akauya apa||munhu kwaye chaiyé[«].

┌─┐ ┌─┐ ┌─┐ ┌─┐ ┌─┐ ┌─┐ ┌─┐ ┌─┐

h8c Kana vatezvara vacho, VaBhuku, ||vakazobvuma kúti[«] mwana

┌─┐ ┌─┐ ┌─┐ ┌─┐ ┌─┐ ┌─┐ ┌─┐ ┌─┐

wavo akazviwanira munhu chaiye.

h8d Asati auyaka, ||va||ti, "Handina mwana anoroowa kuMa-

Ndevere, "||asi zvino||vongoti, "MaNdevere, ndivo vanhu
cheté."

h10.

h10c Nezuro vana vakaenda kumafuro vakaona gumbo remunhu
rakangoti ka||pakadaro apo.

h10d Mapurisa nhasi azowana sagumbo wacho akangotiwo ka||
pakadaro kuseri kwechuru.

h10e Zvinofungidzirwa kuti angangodaro akaurayiwa

nematsotsi kana mabhinya zvawo.

h13.

h13d Bani iroka rakaorera chaizvo zvokuti rinogona kukudza
chibage chaizvo.

h13e Asi nyabani wacho hapana zviripo.

└┐ - - - ┐'┐ └┐ - └┐ -
?

h13f Gore negore (anongorirega richivata.

└┐ ┐ └┐ ┐'┐ - - └┐ - ┐┐ - -
?

h13g Ndinofunga ndichatoenda zvangu ndigomunyengetedza (kuti

└┐ ┐'┐ └┐ └┐ ┐┐ └┐ ┐ - - └┐ ┐ - - ┐'┐ - -
anditengesere zvangu ndione zvokuita naro.
- - ┐ - - ┐'┐ ┐ - - └┐ - - └┐ - - ┐'┐

h14.

h14s Zvikoro zviri kuvhurwa mangwana.

└┐ - └┐ ┐ └┐ - └┐ ┐'┐ -

h14t Ndine mwana anoenda kuchikoro chebhoddingi.

└┐ - - - - ┐┐ └┐ - - └┐ ┐'┐ └┐

h14u Anoenda nhasi kuitira kuti azowana nguva yekugadzirira

└┐ - ┐┐ └┐ └┐ - - - - - - ┐ - - - - - └┐ └┐ -
? └┐
kupinda chikoro mangwana.

└┐ - - - - ┐ - └┐ ┐'┐ -

h14v Baba vake vachaenda naye nemota.

└┐ ┐ - └┐ - - └┐ ┐'┐ - - -
h

h15.

h15e KwaZimunya kwaita rufu.

┐┐ └┐ - └┐ - - -

h15f Ambuya vaye vekufarafara ndovashaya.

└┐ - - - └┐ - - - - ┐'┐ ┐'┐ └┐ -
?

h15g Isu tichaenda mangwana kunobata maoko.

└┐ - - - └┐ └┐ ┐ - - - └┐ - -
?

h15h Vanenge vachida kuenda nesu vanogona kuti[«]udza nokuti

└─┐ └─┐ └─┐ └─┐ └─┐ └─┐ └─┐ └─┐ └─┐ └─┐
tiri[«] kuenda nemota.

└─┐ └─┐ └─┐ └─┐

h15i Tichasi[«]muka mangwana masika[«]ti natuu.

h16.

h16c Ndaona vanamai Muza neshamwari dzavo kumagirosa uko.

└─┐ └─┐ └─┐ └─┐ └─┐ └─┐ └─┐ └─┐ └─┐ └─┐

h16d Vanga vachienda kunokwira mabhazi[«] ekuchechi kwavo||ari^o

└─┐ └─┐ └─┐ └─┐ └─┐ └─┐ └─┐ └─┐ └─┐ └─┐
kuenda kumusangano wogore. ?

└─┐ └─┐ └─┐ └─┐ └─┐

h16e Vati vachadzoka mushure mema[«]svondo maviri.

└─┐ └─┐ └─┐ └─┐ └─┐ └─┐ └─┐ └─┐

h16f Nguva yese iyoyo||vachange vari kumu[«]sangano.

└─┐ └─┐ └─┐ └─┐ └─┐ └─┐ └─┐ └─┐

h16g Hameno kuti varume vavo vanoti chii.

└─┐ └─┐ └─┐ └─┐ └─┐ └─┐ └─┐ └─┐
h h

h19.

h19e Zvaitwa nevana vepapo nhasi||zvandishamisa.

└─┐ └─┐ └─┐ └─┐ └─┐ └─┐ └─┐ └─┐

h19f Baba vavo ndibhizinesimeni uyé vanopa zvavanoda

└─┐ └─┐ └─┐ └─┐ └─┐ └─┐ └─┐ └─┐
zvose.

└─┐

h22d Mwana wangu akapedza 'A' level yake.

└ ┐ ─ ─ └ ┐'└└ ┐; └ ─ ┐'─

h22e Zvino ava pagomo refundo paYunivhesiti.

└ ┐ ─ ─ └ ┐ ┐'└└ ┐ ─ ─ ─ ─ ─ ─

h22f Mazuvano ave[◀] kungogara[◀] ari mulibráry.

└ ┐'─ ─ ─ ─ ─ ─ ┐'─ ─ ─ ─ ┐'└└└└

h22g Chokwadi kudzidza ebasa rakapoma chaizvo.

┐ ─ ─ ─ ┐'└└ ─ ┐└└ └└└└└└└└└└

h22h Zvino[◀]toda vakashinga mwoyo.

└└└└└└└└└└└└└└└└└└└└└└

h22i Vazhinji kana paYunivhesiti pachos vanopera kufoira.

└└└└└└└└└└└└└└└└└└└└└└└└└└└└

h23.

h23b Kudzidza chinhu chakakosha kuvanhu||zviku[◀]ru vechidiki

└└└└└└└└└└└└└└└└└└└└└└└└└└└└

avo.

└└

h23c Vana vanodzidza||vanokura vane ungwaru chaizvo.

└└└└└└└└└└└└└└└└└└└└└└└└└└└└

h23d Vanodzidzira kuzozvibatsira mune ramangwana.

┐ ─ └└└└└└└└└└└└└└└└└└└└└└└└└└└└

h23e Mwana kana achinge adzidza hauzombomutyira kana nokuti

└└└└└└└└└└└└└└└└└└└└└└└└└└└└

anenge okwanisa kuzvibatsira.

└└└└└└└└└└└└└└└└└└└└└└└└└└└└

h25.

23b "Hoo||munoreva Joni.

hoo: L r r - h' h

23c HA-a akapedza uyu.

h' h: r r - L h' h

23d Ava kudziidza zvekurapa izvi.

r - - h' h: L r r L L

23e Emma ndiye ari kudziidza kuNyatsime uko.

h' h: h' L

23f Gara zviya||wenyu akazopasa here?"

L - h' h: L - L r L h' h L

23g "A-a kwaani.

h' h: L h' h

23h Akangogara pamba uye.

L - - L - L h' - -

23i Vagoni zvenyu imi."

h' h: L h' - L h

46.

46c Svondo yakapera handina zvangu kwandakamboenda.

L - - h' h: L L r - h' - L - - L h' h

46d Ndakaswera ndichitauriana nemhuri yangu zvangu.

L h' h: L - - h' h: L L L h' h h' h

46e Ndakadziidza kuti chinhu chakanaka munhu kuti

L h' h: L - - h' h: L - h' h: L - -

umbowanawo nguva yokukurukurirana nemhuri yako.

h' h: h' - L - - L - - L - - L h' h: L h'

46f Unodziidza zvakawanda.

L - h' h: L - h' h

52/3j Saka ngatibve tazobatana [◀]nzira ireruke."

h1.
 L _ J L J, J L _ _ _ L J _ _ _ J

h1c Nezuro ndakaenda kuchipatara kunoona mwana wá[◀]vátete

L J, J L J, J; L _ _ _ J L J, J L _ _ _ _
vangu ariko.
 J. L _ _ J

h1d Zvinonzi akabayiwa nebanga nemumwe murume kubhawa.

J L J _ _ J L J J, J _ J L _ _ J L J _
 h1e Hanzi murume uyu||akangosv[◀]ikoti, "Ndiw[◀]é wakatora
 L _ _ _ J J, J _ _ _ J L J J L _ _ _ _
 m[◀]usikana w[◀]angú nezuro," achibva atanga kumurova.
 _ _ J _ J, J L J, J L J L J L J, J

h1f Nyaya yacho||iri kumap[◀]urisa.

L J J J; J _ _ _ J
 ?

h2.

h2r Ndaudzwa kuti||ndinofanira kuenda kunoona dhokta nhasi

L J L _ _ ; L J L _ _ L J; _ _ J L J, J
 masi[◀]kati.
 L _ J J

h2s Ndiri kurwara negumbo rangu rerudyi.

L J L J, J L J _ J L _ L J
 h2t Rakakuvara nezuro zvandakaedza kuzarura dhoo negumbo

J J _ _ _ L J, J L J J, J J L _ _ J; L J L
 ndichib[◀]va ndadonha zvaka[◀]ipa chaizv[◀]o.

L J L J L, J; L _ J L L J, J

h3.

h3d Zvinonzi izvo||kana mvura ichinaya nemabhanan'ana,||munhu

wakafanira kungwarira mheni.

h3e Vanhu vazhinji kumusha vanorohwa nemheni nokuti kana

mvura ichinaya vanomira nemuti vachiedza kuhwanda

mvurá.

h3f Mazuvano hurumende iri kudzidzisa vanhu nezvemheni.

h4.

h4e Kana úrì kúenda kùlibrary ndinodawo kukútuma.

h4f Ndinokumbira kuti uende nebhuku ranqu iri.

h4g Ndikasaridzorera nhasi|ndinoripiswa mari-zhinji kwazvo.

h4h Raifanira kudzoserwa nezuro chaiye.

h6.

h6h Svondo rakapera kwaiva nemisangano yevavimi mizhinji

kwazvo.

47

h6i Mukuru wemadomeni, VaGumbo, ndivo vaitaura nekudzidzisa
 varimi.

h6j Vanhu vose vemunharaunda yedu vakakokwa.

h6k Kwakaurayiwa mombe nhatu dzekudya pamisangano iyi.

h7.

h7e Ini ndinoda kuendeswa mwana kuchikoro chitsva chiri

kumhiri uko.

h7f Hanzi VaMuti, mukuru wechikoro chacho, vanoziva basa
 ravo chaizvo.

h7g Maticha avo ose akaenda kukoreji.

h7h Uye mari yacho yechikoro haina kuwandisa.

h8.

h8b Muroora akauya apa munhu kwaye chaiye.

h8c Kana vatezvara vacho, VaBhuku, vakazobvuma kuti mwana

h19g Gore rino vose vakatengerwa mapuyuzha thri-o-fayifi.

┌───┐ ┌───┐ ┌───┐ ┌───┐ ┌───┐ ┌───┐ ┌───┐ ┌───┐ ┌───┐ ┌───┐

h19h Asi nhasi zvanzi vabatwa vachiedza kubira baba vavo

┌───┐ ┌───┐ ┌───┐ ┌───┐ ┌───┐ ┌───┐ ┌───┐ ┌───┐ ┌───┐ ┌───┐

mari.

┌───┐

h19i Vana vanochitora zvinhu||vasina kupihwa||ndevaye vane

┌───┐ ┌───┐ ┌───┐ ┌───┐ ┌───┐ ┌───┐ ┌───┐ ┌───┐ ┌───┐ ┌───┐

vabereki vanoshaya kana kuti vakaomera.

┌───┐ ┌───┐ ┌───┐ ┌───┐ ┌───┐ ┌───┐ ┌───┐ ┌───┐ ┌───┐ ┌───┐

h19j Hameno kuti vapindwa neyi chokwadi.

┌───┐ ┌───┐ ┌───┐ ┌───┐ ┌───┐ ┌───┐ ┌───┐ ┌───┐ ┌───┐ ┌───┐

h20.

h20r Pamusoro pegomo reFura pane midziyo yakawanda chaizvo.

┌───┐ ┌───┐ ┌───┐ ┌───┐ ┌───┐ ┌───┐ ┌───┐ ┌───┐ ┌───┐ ┌───┐

h20s Zvinonzi zvinhu izvozvo zvinoshura ukazvibata.

┌───┐ ┌───┐ ┌───┐ ┌───┐ ┌───┐ ┌───┐ ┌───┐ ┌───┐ ┌───┐ ┌───┐

h20t Hanzi||vanozvitora zvinhu izvozvo vanongonyangadika.

┌───┐ ┌───┐ ┌───┐ ┌───┐ ┌───┐ ┌───┐ ┌───┐ ┌───┐ ┌───┐ ┌───┐

h20u Ini ndinoda kuti ndiende ikoko kunozvionera nemaziso

┌───┐ ┌───┐ ┌───┐ ┌───┐ ┌───┐ ┌───┐ ┌───┐ ┌───┐ ┌───┐ ┌───┐

angu.

┌───┐

h20v Handimbotendera zvinhu zvakadaro ini.

┌───┐ ┌───┐ ┌───┐ ┌───┐ ┌───┐ ┌───┐ ┌───┐ ┌───┐ ┌───┐ ┌───┐

h22.

h25c Kudzidza kwamazuvano kwava kundishamisa ini.

h25d Mukati pachine chiri kuitwa nematicha?

h25e Vana vangu handimbonzwi zvavanodzidza ini.

h25f Zvingogona kuti ininiwo handina zvandakadzidza.

h25g Hameno chokwadi.

h32.

h32c Asi zvinoita vanhu||vanofunga kuti ini||ndinoziva

nezvenyaya yemwana uye||akaitiswa nhumbu naJoe.

h32d Vanamai Chipa ndivo vane||zvavanoziva nezvenyaya yacho.

h32e Iniwo zvangu||handizive zvavanoziva.

h32f Asi nhasi||ndopomerwa mhosva.

h33.

h33c Zvinhu zvinoitwa naMaria zvinoti kushamisa zvikati

kubhowa.

— — —

h33d Ndinoreva zvinhu zvakaita sokuziva vanhu vose.

h33e Makamboona kwani||munhu anoziva munhu wose muguta.

h33f Unoshama kuti anoiwana nguva kupi||yekuzivana nevanhu
vose ivava.

h34.

h34n Unofanira kuuya kumba kwangu iko zvino usati wavata.

h34o Ndinoda kukutuma kuti unondimiririra kumusangano
nokuti ini||handisi kunzwa zvakanaka.

h34p Zvino ndikasaenda||kana kutumira mumwe munhu||variko
vangatsamwa chaizvo.

h48d VanaShamiso vandibvunza kuti ndianiko anga achigomera
usiku.

h48e Ndavaudza kuti ndavatezvara vangu vari kurwara.

h48f Takadzoka navo kubva kumusha nezuro.

Reader C

19.

19m Murume anodziidzisa pachikoro icho||anoita zvinoshamisira

chaizvo.

chaizvo.

1470

19n Zvinonzi akaenda kuSouth||akanotengera mukadzi wake

nevana "mbatya dzakanaka kwazvo.

nevana mbatya dzakanaka kwazvo.

$2L - 24 \quad 2 - 114$

190 Asi hanzi rimwe zuva||vakapopōtedzana nemukadzi wake||

akatora mbatya dziye akatengesa.

akatora mbatya dziye akatengesa.

7-1-1 4 1 1 1

19p Vamwe varume hameno kuti vakaita sei chaizvo.

$L - \frac{L}{n} = L(1 - \frac{1}{n})$

23.

23b "Hoo munoreva Joni.

77: 1 1 1 1 1 1

23c HA-a akapedza uyu.

4: 2¹ 2 2 2 2

23d Ava kudziidza zvekurapa izvi.

7 2 4 2 2 2

23e Emma ndiye ari kudziidza kuNyatsime uko.

$$\frac{r}{2} \quad L_1 \quad \frac{L}{2} \quad \text{---} \quad L_2 \quad \text{---} \quad L_3 \quad \text{---} \quad L_4$$

23f Gara zviya wenyū akazopasa here?"

46. L - ɹ - - - L ɹ L ɹ - L ɹ

46c Svondo yakapera handina zvangu kwanda kamboenda.

ɹ L L ɹ - - L ɹ - L - L ɹ L ɹ L ɹ

46d Ndakaswera ndichitauriana nemhuri yangu zvangu.

L ɹ - L ɹ L ɹ L ɹ L ɹ L ɹ L ɹ L ɹ L ɹ

46e Ndakadziidza kuti chinhu chakanaka munhu kuti

L ɹ L - - L ɹ L ɹ L ɹ L ɹ L ɹ L ɹ L ɹ

umbowanawo nguva yokukurukirana nemhuri yako.

L ɹ L ɹ L ɹ L ɹ L ɹ L ɹ L ɹ L ɹ L ɹ

46f Unodziidza zvakawanda.

L ɹ L ɹ L ɹ L ɹ L ɹ L ɹ L ɹ L ɹ L ɹ

52./53.

52/3f "Nhaiwe, ko ūchaenda here kunotenga mbudzi dziya

L ɹ L L ɹ - L ɹ L L ɹ - L ɹ L ɹ L ɹ L ɹ

nhasi?"

L ɹ

52/3i "Ini ndinoda mbudzi nomwe chete nemombe mbiri nehwai

L ɹ - L - L ɹ L ɹ L ɹ L ɹ L ɹ L ɹ L ɹ L ɹ

mbiri.

L ɹ L

52/3j Saka ngatibve tazobatana nzira ireduke."

- - L ɹ - L ɹ L ɹ L ɹ L ɹ L ɹ L ɹ

h2.

h2r Ndaudzwa kuti ndinofanira kuenda kunoona dhokta nhasi

L ɹ L L ɹ - L ɹ L ɹ L ɹ L ɹ L ɹ L ɹ L ɹ

h22f Mazuvano||ave kungogara||ari mulibrary.

└┐┐┐┐ ─ ─ ─ ┐ ┐ ┐ ┐ ┐ ┐ ┐ ┐

h22g Chokwadi kudzidza ibasa rakaoma chaizvo.

┐ ┐ ┐ ┐ ┐ ┐ ┐ ┐ ┐ ┐ ┐ ┐ ┐ ┐

h22h Zvinotoda vakashinga mwoyó.

┐ ┐ ┐ ┐ ┐ ┐ ┐ ┐

h22i Vazhinji kana paYunivhesiti pachofanopera kufoira.

┐ ┐ ┐ ┐ ┐ ┐ ┐ ┐ ┐ ┐ ┐ ┐ ┐ ┐

h25.

h25c Kudzidza kwamazuvano||kwava kundishamisa ini.

┐ ┐ ┐ ┐ ┐ ┐ ┐ ┐ ┐ ┐ ┐ ┐ ┐ ┐

h25d Mukati pachine chiri kuitwa||nematicha?

┐ ┐ ┐ ┐ ┐ ┐ ┐ ┐ ┐ ┐ ┐ ┐

h25e Vana vangu handimbonzwi||zvavanodzidza ini.

┐ ┐ ┐ ┐ ┐ ┐ ┐ ┐ ┐ ┐ ┐ ┐ ┐ ┐

h25f Zvinogona kuti ininiwo handina zvakadzidza.

┐ ┐ ┐ ┐ ┐ ┐ ┐ ┐ ┐ ┐ ┐ ┐ ┐ ┐

h25g Hameno||chokwadi.

┐ ┐ ┐ ┐ ┐ ┐ ┐ ┐

h32.

h32c Asi zvinoita vanhu vanofunga kuti ini ndinoziva

┐ ┐ ┐ ┐ ┐ ┐ ┐ ┐ ┐ ┐ ┐ ┐ ┐ ┐

nezvenyaya yemwana uye akaitiswa nhumbu naJoe.

┐ ┐ ┐ ┐ ┐ ┐ ┐ ┐ ┐ ┐ ┐ ┐ ┐ ┐

h32d Vanamai Chipu ndivo vane zvavanoziva nezvenyaya yacho.

┐ ┐ ┐ ┐ ┐ ┐ ┐ ┐ ┐ ┐ ┐ ┐ ┐ ┐

h32e Iniwo zvangu||handizive zvavahoziva.

L L' L N Y L L L L N L L -

h32f Asi nhasi||ndopomerwa mhosva.

$\frac{1}{2} \quad \perp \quad \neg \quad \neg \quad \neg \quad \neg \quad \neg \quad \neg$

h34.

h34n Unofanira kuuya kumba kwanqu||iko zvino||usati wavata.

$\frac{L}{?} \text{ --- } L \text{ --- } L \text{ --- } \gamma \text{ --- } L \text{ --- } \frac{L}{?} \text{ --- } L$

h34o Ndinoda kukutuma kuti unondimiririra kumusanganoni

nokuti ini handisi kunzwa zvakanaka.

nokuti ini handisi kunzwa zvakanaka.

$\frac{1}{\sqrt{2}} \begin{pmatrix} 1 & i \\ -1 & i \end{pmatrix}$

h34p Zvino ndikasaenda||kana kutumira mumwe munhu||variko

vangatsamwa chaizvó.

vangatsamwa chaizvó.

L - N: 4

h48.

h48d VanaShamiso vandibvunza kuti/ndianiko anga achigomera

$L R^{-1} L' Y \quad N L N Y \quad \frac{Y}{\lambda} - N L N Y \quad T - - - L T -$

usiku.

LP 7

h48e Ndavaudza kuti ndavatezvara vangu vari kurwara.

1 2 3 4 _ _ 5 6 7 _ _ 8 9 10 11 12

h48f Takadzoka navo kubva kumusha nezuro.

LLLL - - - L - LLL

h48g Tinofanira kutoenda navo kuchipatara nhasi||nokuti vari

$\begin{array}{ccccccc} \downarrow & & & & & & \\ L_2 & - & - & - & L & L_7 & - & - & L & L & - & - & - & L_7 & - & - & L & L \end{array}$

Reader D

23.

23a "Nhai MaiEmma||ko mwana wenyu mukuru||ari kudziidza

kupiko?"

2 5 7

23g "A-a kwaani.

4: 2 2 2

23h Akangogara pamba uye.

7- - L- L L L

23i Vagoni zvenyu imi."

$\begin{matrix} \text{L} & \text{N} & \text{L} & \text{L} & \text{N} & \text{L} & - \end{matrix}$

48.

48e John auya kwandiri áchiedza kúshamwaridzana neni.

T L L N L - - N L L T - J L -

48f Ava kukanganwa mazwi aakanyora mutsamba yake

yokundituka iye.

— — — — — 41

48g Zvino ini handimbofa ndakazvikanganwa zvaakandiita.

[illegible]

52. / 53.

52/3g "Ehe||ndichaenda asi ndava kuda mbudzi pfumbamwe

$\frac{L^2}{7} \quad L^{-1} \cdot L^{-\frac{1}{2}} \quad L - - - - L^{\frac{1}{2}} L^{-1}$

$\mu \quad \mu \quad \mu \quad \mu - \quad \mu \mu \quad \mu \mu \quad - - - \quad \mu \mu -$

mvura.

LF-

h3f Mazuvano||hurumende iri kudzidzisa vanhu nezvemheni.

L T L Y L _ P - -- L P L J - Y P Y P L Y

h4.

h4e Kana [∠]_{uri} kuenda kulibrary|| ndinodawo kukutuma.

$L - T - L$ $L - N$ $L \gamma$ $T - L$ $L \gamma$

h4f Ndinokumbira k^utⁱ uende nebhuku rangu iri.

$\frac{1}{2} - \frac{1}{3} = \frac{1}{6}$

h4g Ndikasaridzorera nhasi||ndinoripiswa mari zhinji kwazvo.

$\frac{1}{2} - \frac{1}{4} = \frac{1}{4}$

h4h Raifan^uira kudzoserwa nezuro chaiye.

U---U U---U U---U

h6.

h6h Svondo rakapera kwaiva nemisangano yevavimi mizhinji

$\Gamma \cup \{x\} = \Gamma$

kwazvo.

15

h6i Mukuru wemadomeni, VaGumbo, Ndivo vaitaura nekudzidzisa

$\frac{1}{\sqrt{2}} \begin{pmatrix} 1 & -i \\ i & 1 \end{pmatrix}$

varimi.

L L L

h6j Vanhu vose||vemunharaunda yedu vakakokwa.

L - T - N L - N L - - - N -

h6k Kwakaurayiwa mombe nhatu||dzekudya pamisangano iyi.

[illegible]

h19i Vana vanochitora zvinhu vasina kupihwa||ndevaye vane

vanoshaya||kana kuti vakapmera.

h19j Hameno kuti vapindwa neyi chokwadi.

h23.

h23b Kudzidza chinhu chakakosha kuvanhu||zvikuru vechidiki

avö.

h23c Vana vanodzidza vanokura vane ungaru chaizvo.

h23d Vanodzidzira kuzozvibatsira mune ramangwana.

h23e Mwana kana achinge adzidza//hauzombomutyira kana//nokuti

anenge okwanisa kuzvibatsira.

h33.

h33c Zvinhu zvinoitwa naMaria||zvinoti⁴ kushamisa zvikati

6 - - - 4 - - 2 2 2 2 - - - 2 - -
 kubhowa.

h33d Ndinorev[˘] zvinhu zvaka[˘]ita sokuziva vanhu[˘] vose.

h33e Makam¹boona kwani munhu anoziva munhu wose muguta.

h33f Unoshama kuti||anoiwana nguva kupi yekuzivana ne²vanhu

vose ivava.

Reader E

h1.

h1c Nezuro ndakaenda kuchipataral||kunoona mwana wa³vatete

vangu ariko.

h1d Zvinonzi akabayiwa nebanga nemumwe murume kubhawa.

h1e Hanzi murume uyu akangosvikoti, "Ndiwe wakatora

musikana wangu nezuro," achibva atanga kumurova.

h1f Nyaya yacho||iri kumapurisa.

h2.

h2r Ndaudzwa kuti ndinofanira kuenda||kunoona dhokta nhasi

masikati.

h15e Kwa^zimunya kwaita rufu.

┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌

h15f Ambuya vaye vekufarafara||ndivo vashaya.

┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌

h15g Isu tichaenda mangwana kunobata maoko.

┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌

h15h Vanenge vachida kuenda nesu||vanogona kuti|udza|nokuti

┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌

tiri kuenda ne^mota.

┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌

h15i Tichasimuka mangwana masikati natuu.

┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌

h16.

h16c Ndaona vanamai Muza||neshamwari dzavo kumagirosa uko.

┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌

h16d Vanga vachienda kunokwira mabhazi ekuchechi kwavo||ari

┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌

kuenda kumusangano wegore.

┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌

h16e Vati vachadzoka mushure mema^svondo ma^vviri.

┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌

h16f Nguva yose iyoyo vachange vari kumu^ssangano.

┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌

h16g Hameno kuti varume vavo vaⁿoti chii.

┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌ ┌

h19.

h19e Zvaitwa nevana vepapo||nhasi zvandishamisa.

┌┐ - - ┌ - 7┐.┐ ┐ ┌ ┐ ┌ ┌┐.┐

h19f Baba vavo ndibhizinesimeni uye vanovapa zvavanoda

┌┐.┐ - ┌┐ ┌┐ ┌┐ - ┌┐.┐ 7 - - ┌┐ ┐ ┌┐.┐ -
zvose.

┌┐

h19g Gore rino||vose vakatengerwa mapuyuzha thri-o-foo.

┐ - ┌┐.┐ ┐.┐ - ┌┐ - ┐┐ ┐ - ┐┌┐.┐ 7┐ ┐ ┌┐

h19h Asi nhasi zvanzi vabatwa vachiedza kubira baba vavo

7┐ ┌┐.┐ ┌┐.┐ . ┌┐.┐ ┌┐ ┌┐.┐ ┌┐ ┐ - ┌ - ┌ -
mari.

┌┐

h19i Vana vanochitora zvinhu||vasina kupihwa ndevaya vane

┌┐ ┌ - - - ┌┐.┐ ┐ ┌ - - ┌┐.┐ 7┐.┐ - ┌ -
vabereki vanoshaya kana kuti vakapomera.

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h19j Hameno kuti vapindwa neyi chokwadi.

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h20.

h20r Pamusoro pegomo reFura||pane midziyo yakawanda chaizvo.

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h20s Zvinonzi zvinhu||izvozvo zvinoshura||ukazvibata.

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h20t Hanzi vanozvitora zvinhu||izvozvo vanongonyangadika.

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h32f Asi nhasi nddpomerwa mhosva.

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h33.

h33c Zvinhu zvinoitwa naMaria zviḽnoti kushḽmisa zvikati

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kubhowa.

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h33d Ndinoreva||zvinhu zvakaiḽta sokuziva vanhu vose.

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h33e Makamboona kwani||munhu anoziva múnhú wose mǔguta.

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h33f Unoshama kuti anoiwana nguva kupi yekuzivana nevanhu

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vose ivava.

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h34.

h34n Unofanira kuuya kumba kwangu iko zvinoḽusati wavata.

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h34o Ndinoda kukutuma kuti unondimiririra kumusangano

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nokuti ini handíśí kúnzwa zvakanaka.

┌ ʀ - ʀ ʀ ┌ ʀ - ┌ ʀ ┌ - ʀ: ʀ

h34p Zviḽno ndikasaenda kana kutumira mumwe munhu variko

ʀ ʎ - - - ʀ ʀ - - - ʀ - - - ┤ ┌ ┌ ʀ ʀ -

vangatsamwa chaizvo.

h48. ┌ - ʀ: ʎ ┌ ʀ ʎ

h48d VanaShamiso vandibvunza kuti ndi^haniko anga achigomera

usiku.

h48e Ndavau^hdza kuti ndavatezvara vangu vari kurwara.

h48f Takadzoka navo kubva kumusha nezuro.

h48g Tinofanira kutoenda navo kuchipatara nhasi||nokuti vari

kurwara chaizvo.

h57.

h57c Vanamai vakaenda kumusha svondo rakapera.

h57d Nezuro takazonzwa shoko rosvika richiti kumusha

kwavakaenda||kwakaitika nhamo.

h57e Saka nhasi tichatoteverawo nebhazi ramapheru.

h57f Zvichida||tichatozodzoka nechishanu chaicho.

h62e Kukirabhu kwedu uku||kwaita nyaya.

APPENDIX C
TRANSLATIONS OF PASSAGES

19. The man who teaches at that school does quite surprising things. He's said to have gone to South Africa where he bought beautiful clothes for his wife and children. Now, it's said, however, one day they had a quarrel and he took away these clothes and sold them. (questioning the character of some men) It's quite surprising how some men behave.

23. Tell me, Mai Emma, where is your eldest child studying? (Hoo accepts/understands what's been said.) You mean Joan? (Ha-a you didn't know?!) She's completed already, this one. She's now studying about medicine (izvi makes zvekurapa given information.) Ema is the one who is studying at Nyatsime (uko--given info, Nyatsime) By the way, did your child (finally) pass? (Obligatory pause--zviya--both syllables are pulled.) No, it didn't happen. (Kwaani has sense of "Unfortunately no--despite my and her efforts. No, it didn't happen because the odds were against her.) She's just at home (doing nothing), that one. Lucky you!

46. Last Sunday, I never went anywhere. I spent the whole day just talking with my family (despite what I needed to to elsewhere from zvangu. Moreover, I enjoyed the decision I made. It was a good thing to do.) I've since learnt that it's a good thing that someone should find time for talking with/discussing things with your family. (umbowanawo, mbo and -wo emphasize that once in a while--sometimes--one must strive to make an effort to find this kind of time) You learn many things (that way.).

48. John came to me trying to get to be friends with me. He's forgetting the words he wrote in his letter--that one which scolded me. Now, I will never forget what he did to me.

52/3. Hey you, by the way, tell me, are you still going to buy those goats today?

Yes. I'll go, but I now want only nine goats and then I will buy three sheep and not twelve goats as I had wanted (before). What are you going to buy?

As for me, I just want seven goats, two cows and two sheep. So let's go together to make things easier (so the path becomes light).

hl. Yesterday, I went to the hospital to (go and) see my aunt's child who is there. It is said he was stabbed with a

knife by another man at the beer-hall. It is said this man just (on arrival) said, "It is you who took my girlfriend yesterday," and he immediately started beating him. The case in question is in the hands of the police.

h2. I have been told that I ought to go and see the doctor today afternoon. I am ill with my leg of the right. It was injured yesterday as (and when) I tried to open the door with the leg and I immediately fell very badly.

h3. It is said that when the rain is raining with claps of thunder, (a person) you must beware of lightning. Many people at the rural areas are struck by lightening because, when the rain is raining, they stand by a tree--(they) trying to hide (from) the rain. These days, the government is teaching people (concerning) about lightening.

h4. If you are going to the library, I (also) want to send you. I ask that you go with this my book. If I do not return it today, I will be made to pay a lot of money. It was (ought) to be returned (the very) yesterday.

h6. Last week, there were (with) many meetings of farmers. The senior of the agricultural demonstrators, Mr. Gumbo, it is he who was talking and teaching farmers. All the people

of our area were invited. There were slaughtered three cattle (for) to eat at these meetings.

h7. I (myself) want to send (my) child to the new school which is over the other side of the river there. It is said Mr. Muti, the head of the very school, knows his work very well. All his teachers went to college. And also the school fees are not too much.

h8. The daughter-in-law (bride) who came to this place is a very (really) good (very proper) person. Even the very father-in-law, Mr. Bhuku, (he) finally agreed that his child (he) found for himself a proper person. Before she came, he used to say, "I have no child who marries (from) the Ndebele people," but now he (just) says the Ndebele are the only real (proper) people.

h10. Yesterday, the children went to have some fun and (they) saw a dismembered leg of a person, (it) lying just like that. The police today, they finally found the owner of the leg also lying abandoned behind an ant-hill. It is suspected that it is possible that he might have been murdered by robbers or even by wild, jungle people.

h13 That vlel is very fertile, so much so that it is capable of producing very healthy maize. But he, the

proprietor of the field himself, there is nothing there (he is completely useless). Year after year, he just lets it lying (unused). I think I (for my part) shall eventually go and then persuade him that he should sell (it to) me so that I see what to do with it.

hl4. Schools are being opened tomorrow. I have a child who goes to boarding school. S/he goes today so that s/he will find time to prepare to go to class tomorrow. His/her father will go with him/her by car.

hl5. At Zimunya's, there has occurred a funeral. That old lady, the cheerful one, it is she who died. We will go tomorrow to offer our condolences. Those who will be wanting to go with us can (are able to) tell us, because we are going by car. We shall start off tomorrow afternoon at 2:00 pm.

hl6. I saw Mrs. Muza and her friends at the grocers' shops (there). They were going to board busses of their church which are going to the meeting of the year (annual meeting). they said they will come back after two weeks. All that time, they will be at the meeting. I don't know what their husbands say (about it.)!

h19. What was done by the children of that place today has surprised me. Their father is a businessman; also, he gives them everything that they want. This year, all of them were bought (for) Peugeot 304's. But, today, it has been said they have been caught trying to steal money from their father. The children who (normally) take things without being given are those who have parents who lack (things) or who are stingy. I don't (know) what got into them, honestly. (This expression of uncertainty has to be a sentence and cannot be read as a question.)

h20. On top of Mount Fura, there are very many utensils. It is said those things are taboo if you touch them. It is said those who take them (those things) simply disappear. I myself want that I go there to (go and) see for myself with my eyes. I never believe (in) things like that.

h22. My child finished his/her A level. Now s/he is at the mountain of education at the University. These days, s/he is just staying, being in the library. Truly, learning is a very big task. It needs those who are resolute in the heart. Many even at the very University do fail. (A contrast with secondary, primary, and other schools is implied.)

h23. Learning is a precious thing to people, especially those of the younger generation. Children who learn grow up, having a lot of wisdom. They learn to finally help themselves in (matters concerning) tomorrow. A child, when s/he has studied, you will not ever fear for him/her, never, because s/he will then be able to help himself/herself.

h25. The education of nowadays, it is now astonishing me, really. Would you say there is still something being done by the teachers? My children, I do not ever understand what they learn myself. It can be possible that I myself, as well, I have nothing that I studied. I don't know, truly. (Oh, dear! ie. It might be because of my own ignorance)

h32. People think that I know about the case of that child who was impregnated by Joe. Chipo's mother and company, it is they who have what they know about the case. I (the insignificant one) do not know what they know. But, today, I have come to be accused in the matter.

h33. The things that are done by Maria are both surprising and boring. I mean things (which) are like knowing all people. Where did you ever see a person who knows every person in town? You get surprised that she finds it where....the time to know each other with all these people.

h34. You must come to my house right now, (you) not having slept (ie. before you sleep). I want to send you that you (go and) stand in for me at the meeting because I am not feeling well. Now if I should not go and (if I don't) send another person, those who are there may get cross very much.

h48. Shamiso and others have asked me (that) who is it who was groaning during the night. I told them that it is my father-in-law who is ill. We came back with him from home yesterday. We have to go with him (take him) to the hospital today, because he is very ill.

h57. Mother and others went to the communal lands last week. Yesterday, we finally heard word, (it on) arriving, saying at home where they went to (there) occurred a funeral. So, today, we will have to follow also by the evening bus. Maybe we will only return even on (as late as) Friday.

h62. At our club there, there arose a case. When the money was counted, it was discovered that it was short. In trying to look for this thief, it finally came out clearly that it is the treasurer who stole the money. So, he has just been removed from the post and there was appointed another one, and he (the former one) was told that he should replace all this money.

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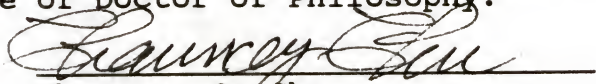
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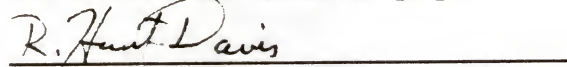
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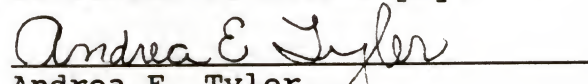
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I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.


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I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.


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